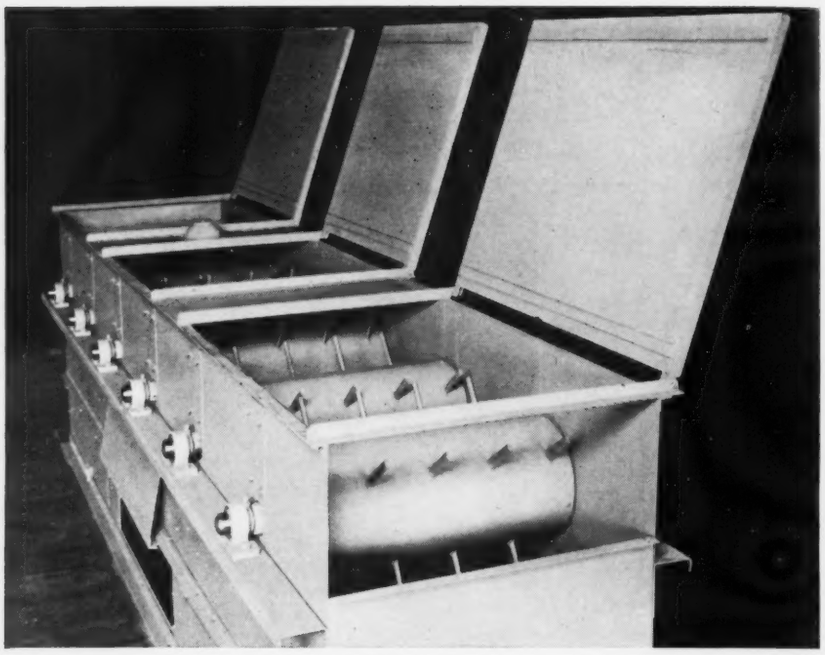
PUBLIC LIBRARY
JUL 16 1941
DETROIT

Textile World

July, 1941

Automotive Fabrics, a group of which comprises bouquet above, are discussed in article on page 56. Other features include: Textiles at Jeffersonville QM (page 48); S.T.A. Convention (page 58); Production in Stitching Room (page 68); Price Ceilings (page 50)

BUILT BY THE CENTRIF-AIR MACHINE CO., INC., *this Superior Cleaner (Patented) can be operated as a complete independent unit following bale openers and blending hoppers or as a supplement to present Centrif-Air Cleaners, Vertical Openers, Buckley Beaters, Lattice Openers, Platt Openers, etc.*

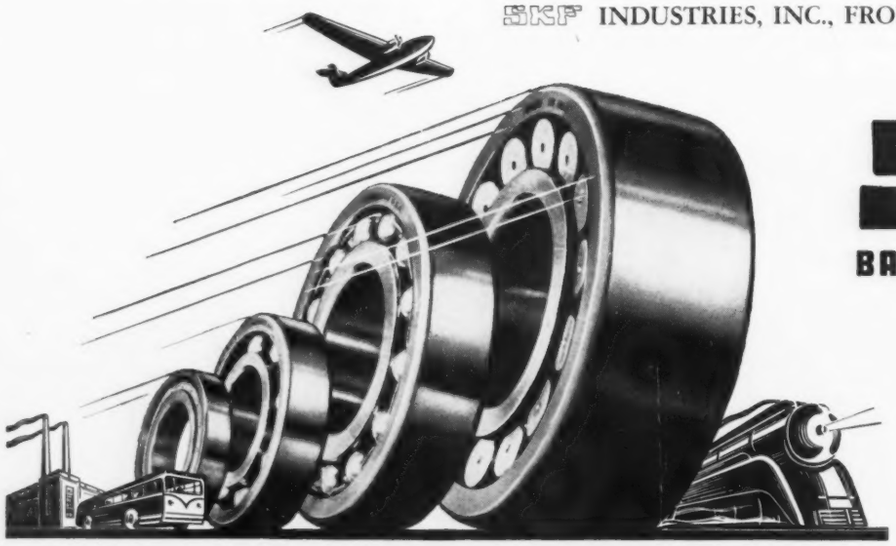


Easy to See

EASIER TO PROVE

IT'S easy to see why this Superior Cleaner (Patented) opens, cleans and conveys long staple and upland cottons, rayon, mixed rayon and cotton, and mixed cotton and wool *without bearing trouble.* Six of the 12 dustproof SKF Pillow Blocks on this machine are in plain sight. Inside them are SKF Bearings assuring clean, smooth performance with only occasional lubrication. Where there's an SKF there's no bearing trouble. 4821

SKF INDUSTRIES, INC., FRONT ST. & ERIE AVE., PHILA., PA.

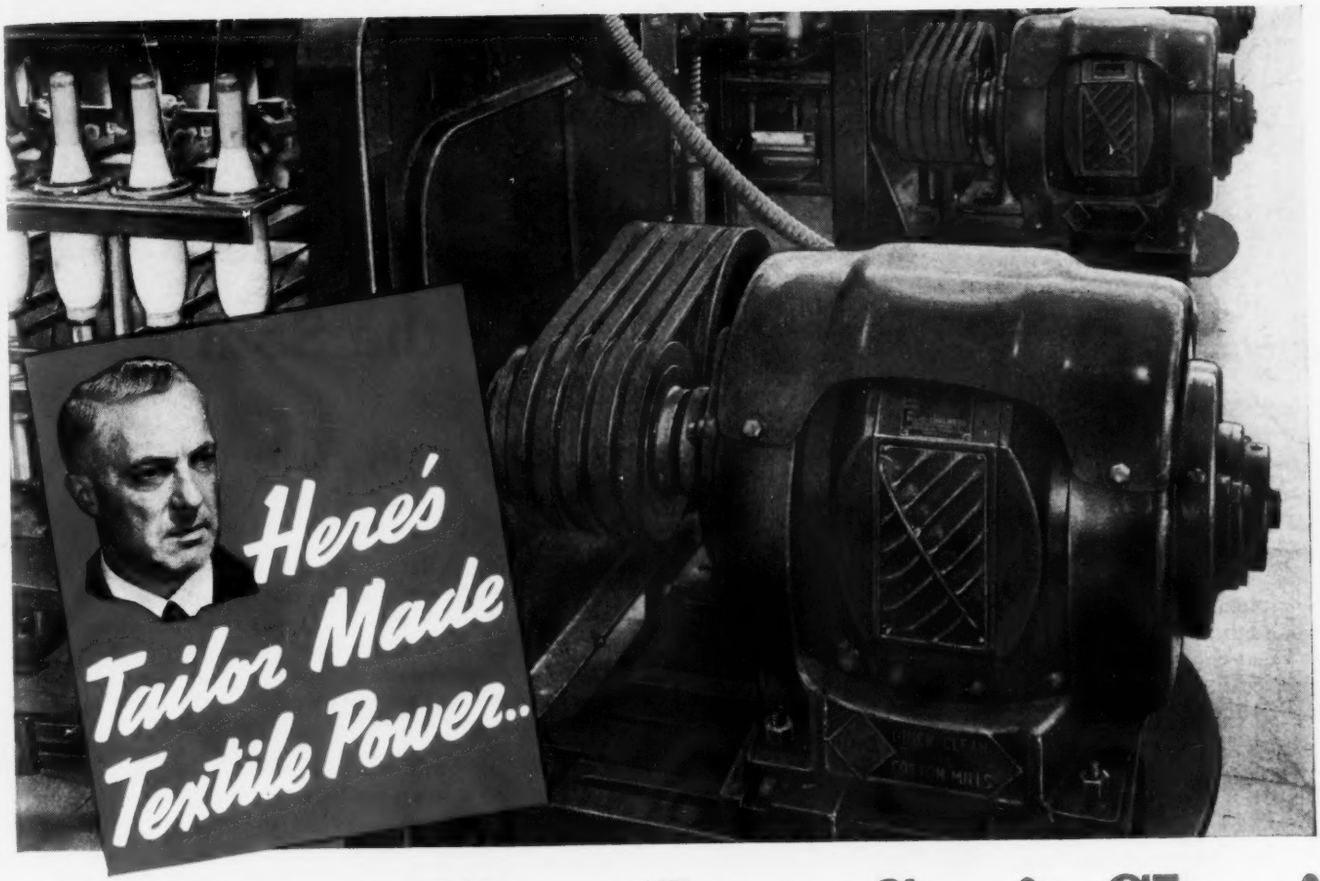


SKF

BALL & ROLLER BEARINGS

TEXTILE WORLD, Vol. 91, No. 7, July, 1941. Published monthly by McGRAW-HILL PUBLISHING CO., INC., (Bragdon, Lord & Nagle Division). Publication Office, 99-129 North Broadway, Albany, N. Y. Editorial and Executive Offices, 330 West 42nd Street, New York, N. Y. Allow at least ten days for change of address. All communications about subscriptions should be addressed to the Director of Circulation, 330 West 42nd Street, New York, N. Y.

Subscriptions: United States and Possessions, and Latin American Republics, $1.50 a year, $2.00 for two years, $3.00 for three years. Canada, $2.00 a year, $3.00 for two years, $4.00 for three years. Great Britain and British Possessions 12 shillings for one year, 27 shillings for three years. All other Countries $2.00 for one year, $4.50 for three years. Entered as second class matter August 25, 1936, at Post Office, Albany, N. Y., under the act of March 3, 1879. Printed in U. S. A. Twenty-five cents per copy.



A Motor That Lint Can't Clog!

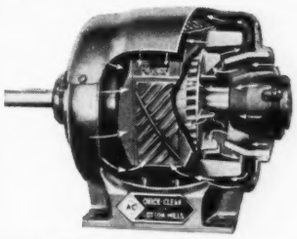
Allis-Chalmers Quick-Clean Lo-Maintenance Motors Avert Shut-Downs . . . Beat Power-Losses . . . Cut Costs with Efficient New Design for Textile Mills.

LINT AND FLY and dust—the toughest textile operating conditions can't stop the Allis-Chalmers Quick-Clean Motor . . . because it's designed and built to clean itself!

A sensational, new "free-flow" construction forces lint in *and out* through big, unrestricted air passages . . . over hard, smooth-as-glass interior surfaces that *can't collect motor-clogging particles.*

No more shut-downs . . . no more time-waste . . . no more production losses! All working parts are dust sealed. Distortionless stator is easily removable. Coils are shielded. Indestructible rotor is mounted on ball bearings in sealed cartridge units that keep oil in . . . keep dust out. Rigid foundation for stator and rotor is provided by one-piece steel base and bearing support.

Get the complete story on Quick-Clean Motors . . . how they are made . . . what savings they bring you. Call the district office near you. Or write direct to Allis-Chalmers, Milwaukee, Wisconsin. A 1419



Check These Quick-Clean, "Free-Flow" Features:

1. Dust-laden air, drawn into motor, is ejected at sides.
2. Air passages are large and unrestricted.
3. All interior surfaces are hard and smooth-as-glass, making it impossible for lint or dust to adhere.
4. All working parts are dust sealed for greater protection.
5. Coils are completely shielded to insure longer life.

ALLIS-CHALMERS LO-MAINTENANCE MOTORS

ADVERTISING PAGES REMOVED

A Builder of the South

Comments by Henry G. Lord

When I was at the Greenville Show in March, one of my first inquiries was about the health of my friend Captain Ellison A. Smyth. I had heard that he had been seriously ill and, at the ripe old age of 93, pneumonia is a critical ailment. And so I was greatly pleased to learn that he is convalescent and gaining strength at his home at Flat Rock, N. C.

My first meeting with Captain Smyth was, I think, in July 1895 at one of the Cotton Manufacturers Association meetings. Although then a comparatively young man, only 47 years old, he had made a remarkable record in the development of the textile South. It is typical of what happened in so many sections of the Southeastern States, particularly the Piedmont section of the Carolinas.

In association with Francis J. Pelzer, whose name was linked with the industrial development of the Palmetto State, he organized the Pelzer Manufacturing Company in 1882. A careful study was made of the best available site. This was found on the Saluda River, 16 miles below Greenville. It was a remote country district, where there were a few cabins by the river bank. In 13 years, under Captain Smyth's supervision, a community of 700 dwellings, 3 churches and all buildings necessary for a well-developed town had been erected by this company which, starting with a small mill of 10,000 spindles, built three other mills with a total of 110,000 spindles, employing 3,000 people, and with a water power development of 5,000 h.p. Even in those days of marvelous growth in the South, when mills were springing up all over the place, I think this must have been a record.

Captain Smyth stood for everything that was progressive and modern in mill construction.

The Olympia Mills, as they were called then, at Columbia, S. C., was the first big cotton mill to use electric power transmission, but Pelzer was the first fully equipped electrified mill, General Electric supplying the equipment for both these pioneer mills. It was considered an extraordinary departure from ordinary practice to put the new Number 4 mill on an elevated tableland and bring the power 2½ miles to the mill instead of taking the mill to the dam.

This was the era when the cotton manufacturer was also a town builder and administrator and he not only took pride in his mill, but equally so in his village. I believe Captain Smyth lived at Pelzer for a good many years, a town without a corporation, municipal government or any politics, where disorder was unknown and where the people were thrifty, sober and contented.

The Pelzer Mill, under Captain Smyth's management, operated successfully for many years. At the time of the big boom, following the first World War, Pelzer was bought by a Northern group and became one of the units of the New England Southern Mills. About five years ago it became part of the Kendall group of mills, which continues its progressive modern management. At the time of this last transfer of the property, I had occasion to visit the mills and village, the first time since 1898, and I could not help thinking what wonderful monuments they were to the initiative and enterprise of a courageous man with vision and faith in the South.

Captain Smyth, who at the time the Pelzer Mills were sold, had reached an age when most men in his position retire, still felt the urge to continue in the occupation which had been his life's work, and he built a much smaller mill (Balfour) in North Carolina, to which, until quite recently, he has given his personal attention and now his grandsons carry on.

The story of Pelzer and its development by Captain Ellison A. Smyth will always be an interesting chapter in Southern cotton mill history.

HENRY G. LORD, *founder of Textile World and president, Bragdon, Lord & Nagle Division, McGraw-Hill Publishing Co.*

M. A. Williamson, *Publisher* — Douglas G. Woolf, *Editor*

William B. Dall.....*Managing Editor*
Winn W. Chase.....*Associate Editor*
Howard P. Galloway.....*Assistant Editor*
Gordon B. M. Walker.....*Assistant Editor*
H. S. Knowlton.....*New England Editor*
William G. Ashmore.....*Southern Editor*
Earle Mauldin.....*Southern Editor*
Paul Wooton.....*Washington Correspondent*
William Buxman.....*Manager*

Textile World

NEW YORK
ATLANTA

JULY 1941
Vol. 91 No. 7

BOSTON
GREENVILLE

A McGRAW-HILL PUBLICATION

Management

How Much Regulation—and How? (Editorial) 45
The Editor Says 46
Russia Brings New Defense Stage Related to Textiles 47
All Tent Duck Made Can't Swamp Jeffersonville QM 48
Price Ceilings on Cotton Textiles 50
Ceiling a "Confession of Failure," says OPACS 51
Price Control in England—Must Be All or Nothing 52
Cotton-Textile Institute Forms Research Division 54
Research Plan Getting Under Way: Steering Committee . . . 55
STA Keys Myrtle Beach Program to Present Needs 58

Methods

Fabrics for National Defense—20 Oz. Woolen Suitings 61
How Many Looms Should a Weaver Run? 62
Research and Control Laboratory Checks Processes and Products. 64
Cost Manual for Yarn Processing 67
Ten Ways to Speed Up Stitching 68
Continuous Peroxide Bleach—New Method 72
Causes and Preventives for Rowey Cloth 96
Slashing and Weaving Discussed in Alabama 97
Fixing Hosiery Machines—Circular 99
Fixing Hosiery Machines—Full-Fashioned 100
Loomfixers' Manual—Cotton 101
Loomfixers' Manual—Rayon and Silk 102
Staple Cotton Fabrics 103

Merchandising

Cotton Promotion Meetings in South 54
Fabrics Gain as Automobile Sales-Point 56
Shantungs Hit Top and Are Likely to Stay for Next Spring . . . 60
New Record in World Rayon Output 112

Mill Engineering

Power for a Small Mill; Diesel Saves $4,000 a Year 73
Air-Conditioning at Davenport Hosiery Mills 74

Men

Georgia Mill Men and Atlanta Textile Club (Pictures) 53
Chicago Yarn Men and Alabama Executives (Pictures) 66
Employees Run Successful Safety Campaign 70
Outings of Various Textile Groups (Pictures) 75
Army Gets Many Textile School Graduates 76
Community Work Requires Sincerity 95
Apprentice Training Helps Overcome Worker Shortage 114

DEPARTMENTS

Textile Equipment News..... 77
News of the Month..... 104
New Publications..... 84
The Overseers' Corner..... 93
Questions and Answers..... 98
New Machinery and Processes..... 77
Textile Calendar..... 108
Leading Editorial..... 45
New Dyes and Chemicals..... 82
News of Suppliers..... 85
Free for the Asking..... 90
News About Men..... 116
Textile Mill News..... 128
Overseers' Practical Helps..... 94

FOR CONTENTS BY INDUSTRY BRANCHES, SEE NEXT PAGE

TEXTILE WORLD (formerly *Textile World Journal*) with which are combined *Textiles*, *Posselt's Textile Journal* and *Textile Advance News*. Published monthly. United States and Possessions and Latin American Republics, $1.50 a year; Canada and all other countries, $2, U. S. currency or 12 shillings. Single copy 25c. Annual index in "Textile World Yearbook & Catalog."

Of this issue, 14,470 copies were printed

Member of Audit Bureau of Circulations
Member of Associated Business Papers, Inc.

Contents copyrighted, 1941
by McGraw-Hill Publishing Co., Inc.
(All rights reserved)

McGraw-Hill Publishing Co., Inc., 330 W. 42nd St., New York, N. Y.

JAMES H. McGRAW, *Founder and Honorary Chairman*

JAMES H. McGRAW, JR., *President* — HOWARD EHRLICH, *Executive Vice-President* — MASON BRITTON, *Vice-Chairman*

HENRY G. LORD, *Vice-President* — B. R. PUTNAM, *Treasurer* — D. C. McGRAW, *Secretary* — J. E. BLACKBURN, *Director of Circulation*

BRAGDON, LORD & NAGLE DIVISION

FRANK L. NAGLE, *Chairman* — HENRY G. LORD, *President*

Atlanta.....*1011 Rhodes-Haverty Building*
Boston.....*1427 Statler Building*
Chicago.....*520 North Michigan Avenue*
Greenville, S. C.....*310 Woodside Building*
Philadelphia.....*16 South Broad Street*
Washington.....*National Press Building*

IN THIS ISSUE

CONTENTS BY INDUSTRY BRANCHES

NATIONAL DEFENSE

How Much Regulation—and How? 45
Erase Hitler . . . or Else! 46
Whither Price Ceilings? 46
Russia Brings New Stage in Defense Plans on Textiles 47
All Tent Duck in U. S. Would Not Swamp Jeffersonville QM 48
Ceiling a "Confession of Failure" Says OPACS 51
Price Control in England Shows it to Be All or Nothing 52
STA Keys Convention to Present Needs 58
Fabrics for National Defense 61
Army Gets Many Textile School Graduates 76
Apprentice Training Will Help Overcome Shortage of Trained Workers 114

GENERAL

Research Plans Getting Underway 55
Fabrics Gain as Auto Sales-Point as Mechanical Changes Diminish 56
Employees Run Their Own Safety Campaign 70
Power for Small Mill—Diesel Saves $4,000 a Year 73
Air Filter at Davenport Hosiery Mills 74
Army Gets Many Textile School Graduates 76
Handling Spare Hands (Pete and Bill) 93
Community Work Needs Sincerity 95
Apprentice Training Helps Overcome Trained-Worker Shortage 114

COTTON

All Tent Duck in U. S. Would Not Swamp Jeffersonville 48
Price Ceilings on Cotton Gray Goods 50
James Davis Speaks at N.A.C.M. Meeting 51
Price Control in England Shows It All or Nothing 52
Pictures of Georgia Mill Men at Sea Island Beach 53
Cotton Promotion Meetings in South 54
C.T.I. Forms Research Division 54
S.T.A. Keys Myrtle Beach Program to Present Need 58
How Many Looms Should a Weaver Run? 62
Research and Control Laboratory Gives Check on Processes and Product 64
Alabama Operating Executives at Auburn 66
Power for a Small Cotton Mill 73
Cotton Twister 77
Lock Screw for Shuttle Grips 78
Slasher Moisture Control 78
Finish for Travelers 79
Clearer Board 79
Slashing and Weaving Discussed at Auburn 97
Hot Air and Cotton Damage 98
Loomfixers' Manual—Cotton 101
Staple Cotton Fabrics 103

WOOL

Fabrics Gain as Auto Sales-Point while Mechanical Changes Diminish 56
Fabrics for National Defense—A Suiting and an Overcoating 61
Employees Run Safety Campaign at Firth Carpet Co 70
Warp Compressor 77
Guarding Against Rowey Cloth 96
Charges for Commission Combing 98

RAYON & SILK

Shantungs Hit the Top and Are Likely to Stay There 60
Slasher Moisture Control 78
Lock Screw for Shuttle Grips 78
Staple Drafting System 82
Loomfixers' Manual—Rayon and Silk 102
New Record for World Rayon—Output Passes Wool for First Time 112

KNITTING

Chicago Yarn Men Entertain Knitters 66
Ten Ways to Speed Up Stitching 68
Air Filter at Davenport Hosiery Mills 74
Knitting Army Mufflers 98
Fixing Circular Machines 98
Fixing Hosiery Machines—Circular 99
Fixing Hosiery Machines—Full-Fashioned 100

PROCESSING

Cost Manual for Yarn Processing—Unit Costs 67
Continuous Peroxide Bleach—New Method to Speed Up Process 72
Outings of Chemists in Various Sections 75
Piece-Dye Kettle 77
Bearings for Printing Machine Mandrels 78
De-Twisting Machine 79
Selvage-Loop Cutter 79
Cloth Conditioner 80
For Regain Measurement of Tentered Cloths 80
Guides for Washing and Dyeing Machines 80
New Dyes and Chemicals 82
Finishing Veiling 98

IN THE NEXT

FURTHER COVERAGE of textiles in defense has involved a visit to Wright Field where a multitude of new fabric types are in use and under test for use in the Air Service. The story of these fabrics has been prepared for the August, 1941, issue. Other defense developments will be covered in that issue.

An interesting analysis of the effect of fatigue on workers will also be given. The article includes suggestions for reducing fatigue.

Other articles scheduled for August include a summary of textile activity for the first six months, analysis of waste in worsted spinning, air conditioning for Nylon hosiery, modernization of Elk Cotton Mills, warp-sizing research, etc.

TEXTILE WORLD

DOUGLAS G. WOOLF, Editor

How Much Regulation—and How?

AMONG ALL THE UNKNOWNS in the next five years of American history, there is one sure prediction: There will be more, rather than less, regulation of business from Washington. Every textile manufacturer, in fact every industrialist, might as well accept that fact now. It's not a question of whether or not they like it; it's a question of how they can help to make such regulation most effective from the standpoint of national defense, and at the same time least destructive of our American system of free enterprise.

That's a good trick if you can do it. And at this stage of national crisis, we *have* to do it.

There are two extremes: (1) Complete operation of all industry and business by the Government; and (2) complete freedom of industry and business to run its own show. The latter can be written off right now as an impossibility. The former *can't* be written off. It *is* a possibility. There is a very strong and articulate group in government which believes that is the only way we can fight the dictator nations.

SO THE PROBLEM resolves itself into one of finding a middle ground between those two extremes—and of finding it in advance and plotting our course toward it, rather than letting the exigencies of the situation creep up on us.

We can't afford to do this job piecemeal. We can't let a Henderson fix prices on certain products, while other elements that enter into costs—agricultural commodities and wages, for example—are inflated either by Government fiat or with Government connivance. We can't let the draft drag men from lucrative civilian occupations into Army camps at $21 a month, while their more fortunate fellows hold up employers for fabulous wages. On the other hand, we can't let industrialists and business men make exorbitant profits out of defense contracts.

The only answer is a democratic procedure involving the conscription of men, industry, labor and agriculture, toward an all-out program of defense.

Too often, a discussion of this sort ends in an academic zone of nowhere; in a plea for cooperation of all groups, without any plan for making such cooperation both mandatory and effective.

This time, we're going to be different. We're going to suggest a plan—and a plan, incidentally, which will be unwelcome to many industrialists in general, and to many textile manufacturers in particular.

We are proposing a 1941 model of the 1933 NRA.

In essence, the NRA had what it takes to make democracy work in Governmental supervision of our national economy. It provided for joint groups in each industry, composed of manufacturers who knew the needs of that industry, and of labor representatives who knew the labor problems of that industry. The result in most cases was fair. The chiseling industrialist was stopped in his tracks. At the same time, labor had its say—as witness the famous 7a clause, the forerunner of most of labor's gains.

Our surprise is not that the NRA worked as badly as it did in many instances, but that it worked as well as it did in many more. Our conviction is that an NRA set-up, under the auspices of the OPM, might be made to *really* work in all instances, at this time of national emergency.

BUT THIS TIME the program should be different. It should not entail the leadership of a Gen. Hugh S. Johnson, whose sole contribution was a temporarily promotional one and whose Blue Eagle turned into the dead cat which he anticipated from the start.

This time, too, the program would not be threatened by a Supreme Court decision in a sick-chicken case.

But this time, also, the program should not be imperilled by the well-meaning but fateful machinations of a group of screw-ball brain-trusters. Nor should it be imperilled by the obstructionist tactics of a minority group of unethical employees, or by a pressure group in organized labor.

The blue-print of a 1941 NRA is difficult to define—particularly in these days of jurisdictional fights between rival labor organizations. But it *can* be set down. In fact it *must* be set down.

And now is the time—not next year, when this country might find its industrial set-up as antiquated as England has found hers, in her hour of great peril.

Probably the best start would be an industrial conference—under the auspices of the OPM—at which leaders of industry and labor in all the vital branches would meet and explore the possibility of preparing now for the grave emergency which is nearing our shores. If such a conference fails—and it can fail only through the stupidity and/or cupidity of industry and/or labor—then industry and labor deserve to be put in the straitjacket which Hitler has provided for similar organizations in his own and his conquered nations.

But we will not entertain the thought that either industry or labor will be so short-sighted.

Douglas G. Woolf

THE EDITOR SAYS

Erase Hitler . . . or Else!

The new phase which the war entered on that fateful week-end of June 21–22 was certainly the most dramatic, and probably the most decisive, potentially, of all the weird turns of this show-down of civilization.

Russia's involvement foreshadows two alternative results, either one of which will probably determine the outcome of the war, at least for years ahead.

First, Hitler may smash Russia quickly, as he has smashed all his opponents to date, with the exception of England. In that case, the almost unlimited resources which he would add to his war machine would make him practically impregnable.

Second, England may be able to utilize this breathing-spell for a blitzkrieg of her own, both in the West and nearer the new war-zone, which—if Russia holds out long enough—might cripple Hitler's machine beyond repair.

The latter result is what England—and this country, as her ally—*must* achieve if there is to be any life worth living for the present generation and probably our children's generation.

The first reactions of some American citizens to the news of this new phase were dangerous in their implications.

One reaction is typified by a remark we heard on a commuting train the Monday after that same fateful week-end. "This proves to me," said one American, "that this scrap over-seas is no business of ours, and that all we have to do is to let 'em fight it out." That, we are convinced, is the expression of isolationists.

Another reaction is summed up in these words: "Now that the Reds are in it, we are not going to fight on the side of Communism." That, too, is an evasion. When you are being held up by a thug, you don't inquire about the religion or ideology of someone who comes along to help you slap the thug down. You accept his help, even if he's another thug.

No one has to endorse Russia's creed, or shed crocodile tears over her invasion. But if Russia can help to stop World Enemy No. 1, the smart thing to do is to support Russia toward that end.

This is democracy's great chance and maybe its last one. Beat Hitler now, before he has his greatest plum in hand. Beat him by any means—fair or foul. But beat him.

Once again, this writer urges a declaration of war against Hitlerism—as one, and the most effective, means to an all-out prosecution of the fight to retain everything this nation has tried to maintain.

The time is now—not next month or next year. Erase Hitler from the face of the earth—and then go on from there. If we don't erase him, our children will go nowhere from here.

This writer believes this more completely than he has ever believed anything in his life before. There is no chance of compromise; there is either complete victory or complete defeat.

America must make its choice—NOW.

Whither Price Ceilings?

By now, price ceilings set by OPACS are no longer the concern of a few small groups in our national economy. When Leon Henderson moved into the automobile industry, he got on big time. His previous performances in such relatively small circuits as combed yarn, for example, assume in retrospect the proportions of mere rehearsals.

But to the combed yarn spinner, and to consumers of combed yarn, and eventually to the entire textile industry, that one appearance was plenty big-time. The ramifications of one such step were apparent in the stagnation of the gray goods market last month while it awaited breathlessly an edict from the King of OPACS. Evidence accumulated that, if you start to set prices piecemeal, you lead into a maze of inequities which eventually would destroy the operation of a free-enterprise system.

What, then, should OPACS and industry do about it?

Let's take the other fellow—OPACS—first. We take it for granted that Leon Henderson doesn't want to destroy the free-enterprise system. We have come to know him, through a series of editorial meetings, and we are convinced of his sincerity. Similarly, the chief of his Textile Section—James P. Davis—has made an excellent impression upon those textile groups with which he has come into contact.

But sincerity isn't enough. The old saw that hell is paved with good intentions is one of the few copy-book maxims that the national experiment of the last eight years hasn't erased; in fact, it is one that has been definitely demonstrated.

Leon Henderson and his staff may have all the good intentions in the world, but if they proceed to tinker piece-meal with the industrial price structure they—and industry—will eventually have on their hands the same sort of endpoint that a well-meaning young boy reaches after he has tinkered with the works of a clock.

What should OPACS do? We don't expect Mr. Henderson to retreat. He has been appointed by the President to do a job. But we *would* expect him to realize the menace of that job, if continued along present lines. We would expect him to let go the tiger's tail before it becomes too late to relinquish it. Specifically, we suggest to him participation in the formation of a 1941 NRA, along the lines proposed on page 45.

What should industry do? If this were not a national emergency, our answer would be: Fight! The textile industry has gone to war on much less provocation. But, from a patriotic standpoint, what we don't need right now is internal dissension. Furthermore, from a practical standpoint, Congress could, and would, plug up any legal leaks overnight, and the fight would be lost before it was started.

But that doesn't mean that industry should supinely take what Henderson hands out. Industry should be articulate. It should make public its side of the case, before, during, and after the setting of price ceilings on its products. We say this, as a ferocious believer in the effectiveness of spot-light publicity.

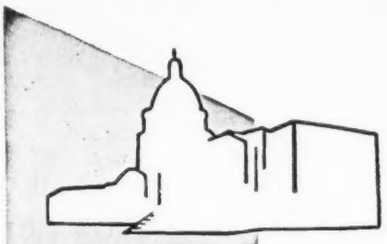
In addition, industry should accumulate all the cost data it can, for both public consumption and submission to OPACS. It should operate in every other legitimate way to consolidate what it knows about its real position in this price experiment.

That means trade-association action. Veiled hints from Washington that such action might lead to citation under the anti-trust laws should be disregarded. Associations have their rights, and those rights have not been nullified by any act of OPACS.

The net answer is, in fact, militant co-operation. Not militant to the extent of fighting Government, but militant to the extent of convincing Government that failure of free enterprise would be merely the fore-runner of loss of American democracy—just as it has been in every erstwhile free country now ruled by a dictatorship. This is under-stating, rather than over-stating, the case.

Russia Brings New Defense Stage

Question of need of major land action will be prime factor in Army textile orders



McGRAW-HILL WASHINGTON BUREAU

PAUL WOOTON, Chief Correspondent
Blaine Stubblefield
Irvin D. Foos Carter Field
Robert Colborn M. G. Maury

By BLAINE STUBBLEFIELD

INSTEAD OF SITTING DOWN for a breather while Russia engages the attention of Hitler, the United States Government immediately put on more defense production steam. It is agreed by practically all military and Administration men that Russia's resistance is a tremendous asset to the Allied cause if and while it lasts. But if it fails, all the world capable of making mechanized war, except this country and Britain, will be under Axis control. Competent Army authority expresses the opinion that the Anglo-American combination will win in the end, due to Axis internal stresses, but it might take years.

On this uncertain issue and on the question whether the Allies can win on sea and air without major land action, rests the future of United States Army man-power. And on that conclusion depends the future need for Army textile goods. The high command of the U. S. Army itself does not know the answer.

It now seems likely that the War Department will hold the present selectees indefinitely and call for more. At this writing it was not certain whether the National Guard would be released and substituted with selectees, or held and be augmented by new men. A bill was reported on its way to Congress, providing strategic equipment for an Army of 3,000,000 men. The conviction is growing that the United States will have to go to war, but many in high authority don't think so.

Thus, when Quartermaster officers say that new orders, including 17,684,000 yd. of wool goods, under the long-term delivery policy, are to meet the Army's need for fiscal 1942, they qualify the statement by adding the goods are for present planned strength. And "planned strength" now means very little, for the President's emergency proclamation removed any limit.

Appropriations also mean very little, because money is no longer a consideration; any approved defense project can have all the cash or credit it asks for. The fiscal 1942 Army appropriation just passed calls for about $2,500,000 for clothing and barracks equipment as compared with about a half billion for 1941. The amount would be raised to a billion on short notice if a big Army was called for.

Of more interest than these euphemereal figures are facts brought out in committee testimony about them. For instance, you find that Army is thinking about really big world-war stuff again; it is putting a cancellation clause in a new contract form, under which contractors could be given stop orders upon the termination of what is still euphemistically called the "emergency." Compensation for goods delivered would be determined by examination of accounts. You hear a QM officer testifying that quality of procurement has been good, but that a compromise was forced in the case of underwear and raincoats. The same officer explains how negotiated purchasing is about the same as awards on bids, because QM calls in the manufacturers and plays them against each other.

BUT EVEN THE "REASONABLE SAFETY" procurement program is developing new tension, to ease which Quartermaster has recently taken two precedental steps. One is the acceptance, in calls for bids, for the first time in this defense push, of all-carded yarn undershirts. Heretofore, combed yarn has been specified. There is an alternative clause in the new specification, but that does not detract from its significance. Information sources did not know when or whether the carded-yarn compromise would be extended to other Army cotton goods now using combed yarn.

Speaking of cotton yarn, the Quartermaster recently canceled calls for 3,000,000 summer undershirts. The reason was not discussed but officials said privately it was because offered prices were too high.

Now, to get back to those precedental steps, the second is OPM priorities applied for the first time in textiles. This is an A-2 rating on specific bid invitations for herringbone twill cloth, cotton textiles, felt, twill jackets, woolen textiles, wool socks, white wool blankets, o.d. wool blankets, and other items. In case you don't understand priority, it simply means that a manufacturer awarded a contract under one of these Army calls, gets the rating. Then he must deliver, come hell and high water, and so must those who have contracts to deliver to him supplies and equipment to produce that order. However, there are several ratings higher than A-2. If the manufacturer called for a piece of machinery, for instance, he might find all sorts of ratings ahead of him in which case both he and the QM would have to wait their turn.

THE BIG WOOL GOODS ORDER previously referred to includes 1,750,000 yd. of 32-oz. wool melton overcoating; 250,000 yd. of 26-oz. doeskin; 432,000 yd. of 20-oz. o.d. suiting; 3,000,000 yd. of 12.-oz. o.d. wool lining cloth; and other items. In addition, 1,500,000 worsted cloth; 2,000,000 yd. light shade worsted; 432,000 yd. 18-oz. o.d. elastique; 5,000,000 yd. 10½-oz. o.d. flannel shirting, are being taken. The only cotton goods procurement of note recently is 10,000,000 yd. of herringbone twill. There was gossip that Army would soon call for 12,000,000 pairs of knitted underwear garments.

All of these procurements are on a long term basis. The wool goods invitation included a clause authorizing the manufacturer to increase the percentage of domestic wool during the life of the contract (as more of this year's clip comes on) but he cannot increase the percentage of foreign wool.

In that connection, the wool growers were in Washington as this was written, negotiating with the Quartermaster and OPM for a higher differential for manufacturers using domestic wool. British fine scoured wool was about 90¢ at Boston against $1.05 for domestic. Growers wanted the full difference; the Quartermaster's office said it would continue to allow differentials according to merit at the time of contract.

All the Tent Duck in the U. S.

Is not enough to sate appetite of the Jeffersonville Quartermaster Depot

By WILLIAM G. ASHMORE
Southern Editor, TEXTILE WORLD

THE SPRAWLING, red-brick Quartermaster Depot, at Jeffersonville, Ind., across the river from Louisville with its race horses and mint juleps, is no longer the sleepy old post it used to be. Since the beginning of the emergency the depot has been a beehive of activity. It is here that all tents, individual or personal equipment, and many other items necessary to the functioning of the Army are purchased. The ramifications of the textiles which go into individual equipment alone are enormous. A few of the items purchased include belts, field bags, bedding rolls, knapsacks, canteen covers, dispatch cases, rope, webbing, first-aid pouches, etc. No clothing is bought at Jeffersonville.

Since July, 1940, the Army has bought perhaps 40,000,000 yd. of duck and duck substitutes, including 21,000,000 yd. of standard 15.5-oz. duck, 11,700,000 yd. of 10.25-oz. twill substitute, and 3,500,000 yd. of other substitutes. Also, a considerable amount of 7.90-oz. dyed shelter-tent duck has been procured.

No official estimates are available as to the probable size of duck purchases during the present fiscal year. Earlier indications were that purchases would be around two-thirds of last year's take, but more recent developments, such as the call last month for bids on 26,000,000 yd. of 12.29-oz. tent duck, make it appear that the quantity purchased during the present year will be greater than last year's requirements. This also goes for textiles used in individual equipment.

Although orders were placed last fall for most of the duck required to July, on May 9 bids were asked for an additional 11,000,000 yd.—mainly to keep the looms operating until orders can be placed for this year's requirements. Generally speaking, the Army was disappointed with the offerings in May. Out of a desired 4,088,000 yd. of 7.90-oz. dyed duck for use in shelter tents, only 1,500,000 yd. was secured at what the Army considered to be a reasonable price; an additional 500,000 yd. offered at 10 to 12c. above the estimated market value was turned down. Better luck was evidenced in the request for 5,950,000 yd. of 13.9-oz. duck; over 4,000,000 yd. were secured at prices satisfactory to the Army, and this quantity was increased somewhat by additional purchases by direct negotiation at bid prices and an extension in delivery date to Dec. 31, 1941. In addition, a relatively small amount of 8-oz. duck was bought, along with some numbered duck.

The rather indifferent bidding in May indicated that there is a shortage of duck-producing equipment. The army believes that there are plenty of duck looms available in the United States to supply all ordinary requirements. However, many of these looms are on twills and other defense fabrics, and some of the output undoubtedly is going into civilian channels. Another of the reasons that no greater quantities of duck are being offered is the difficulty in obtaining plied yarns, due to shortage of twisters. Another bottleneck in the production of duck is said to be the shortage of equipment for mineral dyeing which current tentage specifications require. There is no shortage of sewing machines for fabrication of tents and individual equipment.

A NUMBER OF MILLS have made attempts to produce duck on wide-sheeting looms and other light equipment; but these light looms simply can't stand the strain, and the fabrics produced are not satisfactory. Vibration is excessive, and drop wires become covered with lint and refuse to work. Attempts to make duck on carpet looms at a reasonable cost have failed.

All duck for tentage, except shelter-tent goods, at the present time is bought in the gray in anticipation of a new dyeing and finishing specification which is being worked out, but at this writing has not been made official. The new specification will call for an olive drab color similar to that now standard for personal equipment, somewhat more brownish than the old OD. Dyes probably will be pigment colors, since vat dyes are too expensive for tentage and sulphur dye is not considered satisfactory. The main point which has been holding up official adoption of the new specification—which, incidentally, includes fireproofing, mildew-proofing, and waterproofing treatments—is a shortage of chlorinated resin necessary for the application of pigment dyes. It is believed that this bottleneck will be eliminated shortly, as there are a number of plants capable of producing the resin when patent technicalities and restrictive trade agreements are removed.

The wide variety of shades of khaki and OD required at different QM depots long has been a headache to manufacturers. The new OD specification will standardize color throughout the Army and eliminate arbitrary changes, which in the past often caught a manufacture with a warehouse full of perfectly serviceable goods, except for a suddenly outmoded color. Some time ago spruce green and slate gray were standardized for CCC use.

Another point recently clarified for the gray-goods manufacturer was adoption of a new table for numbered duck in place of the somewhat ambiguous table used formerly.

THE ARMY ASSERTS that tents should be made from duck around 29½ in. wide to be most serviceable; the greatest shortage of duck seems to be in material of this width. The Army will accept split duck made on wide looms, although it is not enthusiastic about the fabric, as the seams are ragged after the tents are fabricated. The fabric considered by the Army to be the best for tentage is 15.5-oz. duck, although various serviceable substitutes have been purchased. The most satisfactory substitute discovered so far is the 14½-oz. plied-yarn duck, which is considered good, and the 10.25-oz. twill, which is considered fair. Numerous other substitutes have been tried, but none is considered really suitable for tentage. The most unsatisfactory of the substitutes to date has been single-yarn flat duck. The Army will buy substitutes other than those mentioned, but it would rather not.

Q.M. is exploring the possibilities of obtaining several million yards of tent duck from Canada, where there is some excess of productive facilities. However, Canadian mills are able to supply only a small percentage of our needs.

With reference to individual or per-

Photo by U. S. Army Signal Corps

Manufacture of pyramidal tents; huge amounts of duck for this purpose are purchased by Jeffersonville Quartermaster Depot, insert at left shows a few of the completed tents

sonal equipment procured at Jeffersonville, the former policy was to buy completed articles from manufacturers. However, during the present year QM plans to buy all webbing, ropes and tent findings, as well as certain special fabrics, such as heavy canvas. The only real bottleneck in individual equipment is a shortage of hardware—belt buckles, clips, fasteners, etc. There has been difficulty from time to time in securing satisfactory webbing, but it is understood that recently new sources have been developed which will eliminate any shortage in the future.

TECHNICIANS AT JEFFERSONVILLE report that although the majority of textiles procured by the Army are satisfactory, in certain instances the physical properties of materials submitted are not up to specifications. That is, some manufacturers consistently produce goods which meet all physical requirements, whereas the same goods from other manufacturers show a wide variation in characteristics. The greatest source of trouble is lower tensile strength than called for by specifications. Another difficulty is variation in water repellency. For example, 15½-oz. duck from some sources has a water repellency of 40 to 45 cm. when tested with a hydrostatic tester; while the "same" duck from another company has a water repellency of only 25 cm. The difference is entirely in the manufacture, especially in the twisting, and not in the finish. If this particular problem of water-repellency in duck is not remedied soon, it is possible that a required repellency may be written into the specifications for gray goods, as well as for finished fabrics. In order to make a good tent, according to Army technicians, duck in the gray should have a water repellency within 10 or 15 cm. of the finished goods, which in turn should have a minimum repellency of 40 to 45 cm.

Although most manufacturers honestly try to supply the Government with goods made according to specifications, QM asserts there have been a few instances where manufacturers attempted to substitute sulphur-dyed goods for vat-dyed goods because of the difference in cost. This practice necessitated the inclusion in the vat-dyeing specifications of fastness to chlorine, since some vat dyes cannot be distinguished from sulphur dyes by ordinary tests. The Army admits that this test is rather severe, because it precludes the use of certain cheaper vats vulnerable to chlorine yet without the undersirable characteristics of sulphur colors. Future specifications may be lightened to exclude only those dyes which show an excess of sulphur by chemical test, without regard to chlorine fastness. Incidentally, there is no objection to sulphur-dyed tool bags, coal bags, heavy numbered duck, etc. Mineral or pigment colors usually are preferred for tentage; vats for individual and personal equipment, including shelter tents.

Another finishing problem arose when the desizing requirements in the finishing of twill was eliminated some time ago. Without desizing, dyed twills were so uneven in shade that the desizing specifications was reinstated.

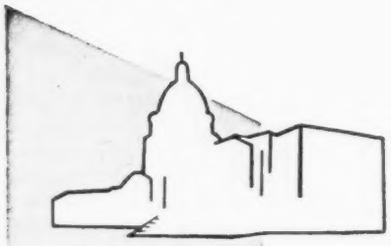
Other technical problems which have come to light at Jeffersonville are as follows: (1) Rubberized sateen duplex fabrics sometimes tend to split because one side adheres more to the latex than does the other. (2) Stuffer warp in webbing occasionally does not give adequate strength, although it may give sufficient body to meet dimension requirements. (3) Warp strength in shelter-tent cloth at times is too low. (4) Occasionally thread with proper breaking strength may have wrong number of yards per pound. (6) Occasionally webbing has ragged edges because of excessive twist in the filling.

Many attempts have been made at Jeffersonville to substitute one fabric for another which is scarcer, but there has been little effort to substitute synthetic fibers for cotton or to make other changes as radical as this. Practically the only fiber substitution which has been made is the replacement of linen with high-strength cotton yarn in harness and saddle straps. An attempt to substitute sisal for hemp in ropes was not successful, due to decreased wet breaking strength. Further, as far as could be learned, no efforts have been made to substitute mercerized or specially processed cotton yarns in webbing or in other places where high tensile strength is desirable, presumably because of the increased cost and difference in appearance and dyeing qualities.

It is possible that more effort will be made to use synthetic yarns and specially processed cotton yarns for various purposes after completion of a proposed new $50,000 testing laboratory, where such matters will be studied.

And Now—Ceilings on Cotton Goods

Henderson sets top poundage prices of 25 to 45c on six gray goods groups



McGRAW-HILL WASHINGTON BUREAU

PAUL WOOTON, Chief Correspondent
Blaine Stubblefield
Irvin D. Foos Carter Field
Robert Colborn M. G. Maury

By BLAINE STUBBLEFIELD

A SCHEDULE of ceiling prices, effective June 30, was placed on six leading types of cotton cloth by Leon Henderson, Administrator of the Office of Price Administration and Civilian Supply. Mr. Henderson said that the increase in the average price of the principal constructions during the last 12 months was due largely to the fear of buyers that prices would continue to rise, and to the activity of speculators and hoarders who have taken advantage of this fear.

It is expected, he stated, that poundage-price ceilings on the six classes of gray goods will establish a basis for prices of other constructions and that normal interplay of market forces will bring the others into line. If this does not happen the ceilings will be extended to cover specifically other types of gray goods. OPACS is studying the price situation in rayon fabrics.

The cotton cloth ceiling is No. 11 in a series of top prices set by OPACS since Feb. 17: used machine tools, aluminum scrap, zinc scrap, scrap iron and steel, steel, combed cotton yarn (May 24), secondary materials containing nickel, hides, pig iron, and gray goods. A ceiling on soft coal was removed after the strike.

This effort of the Government to bid the economic waves be still is regarded by most Administration leaders, and even by many opposed to them, as vastly important. They say that steady prices will aid the efficiency of defense, and that they might mean the difference between collapse and progress in the post-war readjustment period for this country. But many also wonder whether price control can be made to work in the long run, on Henderson's piecemeal basis. Henderson himself is wondering since the Chrysler Corp. refused to comply with his requests to withhold price advances, daring him to put a ceiling on cars.

Henderson's obvious move, of course, is to ask for legislation, which might conceivably freeze top prices on everything from peanuts to locomotives. But Congress might not want to go that far now, if ever. Led by cotton statesmen, the powerful farm group is mobilizing against price ceilings. And, there are the fatalists, who regard the price balloon ascension as inevitable.

Sellers who acquired gray goods prior to June 28 at higher than the new price maximums, and who contracted to deliver at higher than maximums, are invited to apply for permission to perform the contracts up to Sept. 2.

Maximum prices under the schedule: 39¢ per pound for print cloth, carded broadcloth, and tobacco cloth; 30¢, 32¢ and 33½¢ per pound for three classes of sheetings; 25¢ for part-waste osnaburgs; 54¢ for combed broadcloths—all f.o.b. seller's point of shipment. These are gross prices before discounts of any kind and they include all commissions. OPACS says the ceilings take into account current price of raw cotton and make adequate allowance for operating costs. It is emphasized that ceilings are mandatory only on types of goods specified. Ceilings on other items are threatened, but there will be no compulsion without official action.

THE ESTABLISHED CEILINGS are about 15% below current levels. Mr. Henderson says that prices increased 68% during the last year, and that actually means a 106% increase in the average mill margin for the types in question. He says that to insure stability, to forestall speculation, hoarding, profiteering, in the interest of defense and the public, maximum prices must be established. The maximums, he says, allow a mill margin substantially above the average which the industry has enjoyed during the last five years.

As in the case of the ceiling on combed cotton yarns, this maximum makes the buyer equally guilty with the seller, if the maximum prices specified are exceeded. Also, as in the case of combed yarn, the punishment for violation is publicity before Congress and the public. In addition, the wrath of all who comply with the schedule will be invoked against those who don't. All persons in cotton cloth trade are invited to participate as policemen by reporting violations.

Every person who sells 500 lb. or more of gray goods during a calendar month is required to keep records available for inspection, by OPACS, for at least one year, showing every sale, to whom made, date, price, quantity, specifications. And on Aug. 7, and on the seventh of each succeeding month, all such persons are required to submit a sworn statement, on Form No. 111:2 (copies of which OPACS will supply) to the effect that during the preceding month the price schedule was followed.

On June 20, Mr. Henderson amended price schedule No. 7 on combed cotton yarn, exempting exports, retroactive to May 23, date of the original schedule. The amendment changed the differential on coarser counts from ½¢ to ¼¢, to eliminate any hardship on spinners.

* * *

Following OPACS gray goods ceilings, trading ceased in the gray goods markets. Russell T. Fisher, president of NACM, said the ceilings appear to put a premium on inferior goods and warned of serious consequences. W. Ray Bell, president of ACTM, said that the order made cooperation of the industry both difficult and burdensome. Worth Street leaders asked that the ceilings be related to raw cotton and wage rates. National Cotton Council attacked the ceilings as not protecting consumers but tending nevertheless to depress raw cotton prices.

OPACS vs. Market

Following are a few gray goods prices figured from OPACS poundage ceilings compared with market when government figures were announced.

	Approximate OPACS	Market June 28
38½ in., 64 x 60, 5.35 yd..	7 7/8¢	9¼¢
39 in., 80 x 80, 4.00 yd..	9¾¢	11⅛¢
36 in., 48 x 48, 3.00 yd..	10¢	13¢
36 in., 56 x 60, 4.00 yd..	8⅜¢	9¾¢
Tobacco Cloths..	39¢ per lb.	48¢ per lb.

Ceiling a "Confession of Failure"

OPACS would rather do anything else than that, Davis tells N. A. C. M.

OPACS considers a price ceiling a confession of failure, stated James P. Davis, associate director of the textile section, in an address before the National Association of Cotton Manufacturers in Boston, June 5.

"The Office of Price Administration," said Mr. Davis, "would rather do anything else in the world than establish a price ceiling. It is our confession, in a way, of failure, a confession that common-sense and good judgment and the facts in the matter have not been sufficient to convince an industrial group that are responsible for the price rises, that they should themselves prevent the thing from happening; and where we do find that we are forced to make such a move, I think everyone should know that we do it with regret and with the hope that it will be limited to the immediate field and can be dispensed with as quickly as possible."

During the discussion which followed Mr. Davis' brief address, one of the members of the association stated that in the ceiling prices on combed yarns, some of the two-ply numbers were 12 to 15¢ per lb. below current prices, whereas some of the single prices were 9 to 10¢ below. He asked what basic facts were used in arriving at these selling prices.

"We did not have the data available," Mr. Davis said, "nor would it have been possible to get the data immediately for a decision on every count, single and two-ply, of the schedule on a strictly cost basis. We were forced to take practical operation of the market over the last few years and the opinion of a few well-informed producers, as to what constituted proper differentials between the grades and between single and two-ply. In the last few days we have had a number of complaints that, for example, the differentials on the low count singles were too wide; that we were using 30s as a basis and we should have gone below 24s, or ¼¢ a count instead of ½¢ a count. We have not had any complaints on the differential between single and two-ply.

"We arrived at a decision on the price of 30s based on the recent price history of combed yarns on the level of the gross manufacturing margin, with proper allowance for increased labor cost and on such informed opinion as we could mobilize. We then tried to fix a differential above and below and between singles and two-ply on the basis of recent market experience. If there was a mistake in fixing the differentials, it came from that fact.

Harris & Ewing

James P. Davis, associate director of the textile section, OPACS

"We have been told recently that, as I said, these single counts should have been at a narrower differential, and we are fully prepared to consider that point further, if necessary, of the differential between single and two-ply. We recognize that there has been recently considerable distortion, that market differentials have been 7¢ or more where in normal times they would have been 2½ or 3¢, but we understood that to have arisen from the fact that larger amounts were needed for the Army, and in permitting a larger spread than in the normal course of the market, we were trying to keep production up on those two counts."

In answer to the observation that many carded yarns were higher than the fixed prices for combed yarns, at the time of the meeting, Mr. Davis replied:

"I should assume under those conditions, since combed yarn is generally speaking the preferred product, that combed yarn would have the opportunity of supplying the demand up to its capacity. Beyond that, if the carded yarn is quoted and people are willing to pay equal or higher prices than for combed yarn, that would be of small consequence, unless we find it necessary to move into the carded yarns. I had understood that there was a tendency to make the necessary adjustments there. If it doesn't take place, undoubtedly there will be something further about that later."

RUSSELL T. FISHER, president of the N.A.C.M., who presided at the meeting, asked how combed yarn mills which normally do not make what might be called the ordinary commercial grades are going to know what to consider in arriving at the proper price.

"There is a clause in the order," said Mr. Davis, "which provides that a premium over and above the cost of producing ordinary commercial grades may be charged to cover additional cost involved in making special qualities. The manufacturer in making his monthly report, which is required by the order, would give a detailed schedule of such special deliveries and a justification in plain language of the additional amount he charges. This is of course a brand new action; the actual procedure has not been worked out. But I would say that if his explanation makes sense, if the figures given sound reasonably correct, and the whole transaction appears to be in good faith, that our office would probably not question it. But until more detailed instructions are made necessary by conditions that arise and are reported to us, all I would suggest is that you follow the simple, plain intent of the language."

Asked by a member how soon he expected a user of combed yarn to be able to get deliveries "on the prices at the present time," Mr. Davis replied:

"I had understood that practically all deliveries for the next month are going to be made at prices far below the recent prices. As I said a moment ago, about 70 million pounds were already under contract at the time this level was reached, and that only 15 to 20 million pounds had been contracted for at prices above the ceiling price. And of course there you have a supply-demand factor that I am unable to answer. It is more a question of available supply, I should say, than of price."

The meeting was attended by an unusually large number of cotton manufacturers.

Price Control by Trial and Error

England's acts show success demands all or nothing—"all" includes wages

By AN AUTHORITATIVE OBSERVER

ENGLAND'S WAR TIME EFFORTS at keeping prices down illustrate the mistake of trying to control a part of the economic field, while leaving the rest free to follow any false economic fancy.

A comparison of the latest available figures will show how ineffective Britain's price-control policies have been so far. In the first 20 months of World War I, when there were no attempts to put a ceiling on prices, the cost of living index (retail prices) of the British Ministry of Labor rose from 100 in August, 1914 to 140 in April, 1916, or a rise of 40 points in 20 months. In a comparative period in this war the same index has risen from 155 on Sept. 1, 1939 to 197 as of April, 1941, or a rise of 42 points.

Three ministries are charged in England with the control of prices. The Ministry of Supply has under its scope all raw materials that are necessary to national defense. From the beginning of the present war up to May, 1941, raw materials are estimated to have risen 70% in price. While the Minister of Supply had the power over all raw materials, at the beginning of the war only some were put under control, wool, for example, but not cotton which was not controlled until March, 1941.

The efforts of the Minister to achieve stability in the price of raw materials have been continuously frustrated, because inevitably prices of controlled raw materials are affected by a rise in prices outside the controlled field, and he has had to revoke established prices almost before they were in effect. To illustrate: On Dec. 13, 1939, he fixed the prices for domestic wool. On July 12, 1940 the order was revoked and the new schedules showed appreciable increases.

The substantial increase in prices was made necessary by the statutory fixing of higher minimum wage levels for agricultural laborers by a department, other than the Ministry of Supply. The boys do not get together at Whitehall any better than on the banks of the Potomac!

The price of coal has increased 34% in price in a period in which England is practicing price control, chiefly because in the same period the wages of the coal miners have been raised on five different occasions so that they are now 40% higher than they were at the beginning of the war.

THE BOARD OF TRADE entered into the price control picture only after the war had been on for about three months. Retail prices of everything except controlled foodstuffs were mounting, so Parliament rushed through the "Prices of Goods Act." As from Dec. 18, 1939, the prices of all the cheaper clothing and household goods were fixed as that prevailing on Aug. 29, 1939 plus a permitted increase necessary as a result of an increase in the cost of any of nine factors entering into the manufacture of the product (e.g. price of materials, wages, salaries, advertising charges, etc.)

If there is one thing this country should profit by during this emergency, it's England's experience. Her normal economy is so similar to ours that the effects of war-time strain should also be similar. . . . . Particularly is England's attempt to control prices of interest to us right now, because of our recent embarkation upon the same course, through OPACS. The author of the attached article comes to the conclusion that "if any attempt at price control is to be effective, it must be ruthlessly applied to the whole price structure, and equally important is the recognition that wages are part of that structure."—*Editor.*

The price of some 300 articles was supposedly fixed for the duration of the war from "Suits, men's at L4-5-0" to "Maid's nightdress or pyjamas at 7s 6d." Six months later the order of Dec. 18, 1939 was revoked as an alarming rise was taking place in items outside the schedule and a new order came out putting almost every purchasable retail object under a price control.

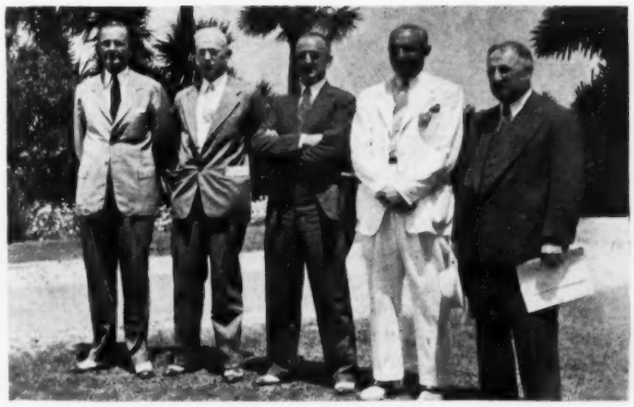
In addition to fixing a maximum selling price, rationing has also been widely used in England to control prices. In the last war rations were only used to spread out commodities of which there was a shortage. In this it is being widely used to discourage purchases as admitted by Sir Kingsley Wood in his Budget speech on April 7 last: "If money were to be used by the public to purchase whatever goods are obtainable in shops it would overcome all obstacles set up and precautions taken against a rise in prices. *That is the object of our systems of price control, rationing and the like.*" (Italics are the author's.)

The textile industries have been special victims as the quota of textile goods permitted to be released for the retail trades was drastically reduced very early in the war. On June 1 a drastic order rationing clothes was introduced which will deal them another blow.

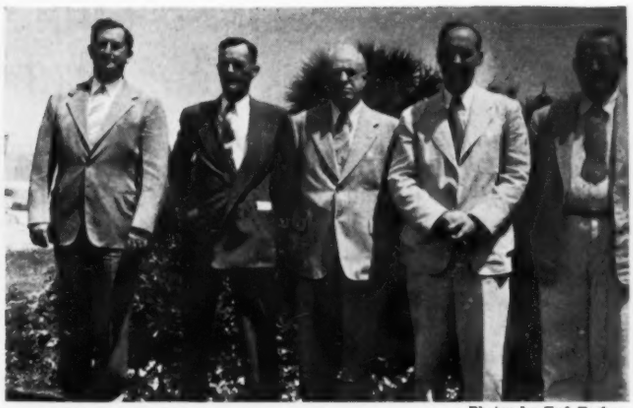
Unfortunately, all three ministers responsible for controlling prices have been consistently confronted with one factor outside their sphere which stubbornly vitiates any effort at the stabilization of prices. There is no ceiling on wages. In England this sets up a particularly vicious circle, as in a large number of industries wages are fixed in relation to the price levels and as long as there is the slightest fluctuation in any part of the price system, the effect extends in an ever widening compass. Some wages are based on the cost of living index and others on a sliding scale in relation to the price at which the product of the industry is sold.

It is obvious from the experience of England that if any attempt at price control is to be effective, it must be ruthlessly applied to the whole price structure. In the case of imported goods, a long term contract such as England was able to make for New Zealand butter, should prove an effective control, although this would not cover increased transportation costs due to intensified war hazards. Equally important also is the recognition that wages are part of that structure. It is not possible to maintain the fiction that labor is outside the operation of a planned economy that all nations must adopt these days when they engage in war.

Georgia Mill Men at Sea Island Beach



A group of past-presidents of the Cotton Mfrs. Assn. of Georgia—(left to right) Fuller E. Callaway, Jr., LaGrange; Paul K. McKenney, Columbus; R. O. Arnold, Covington; Normal E. Elsas, Atlanta; J. A. Miller, Atlanta. For meeting report see June **Textile World.**



Photos by Ted Forbes

Officers of the association—(left to right) J. T. Hightower, Thomaston, vice-president; A. A. Drake, Macon, a director; G. I. Parmenter, Atco, treasurer; Geo. P. Swift, Columbus, president; Julian M. Longley, Dalton, a director.

Eddie Clapp, Georgia Power Co.; Julian Longley, American Thread Co., Dalton; James Platt, Chicopee Mfg. Corp. of Ga., Gainsville; and Pierce Roberts, Atlanta Textile Machine Co.

T. M. Forbes (right), secretary of the association, and his new executive assistant, John W. Wilkerson.

Staff photos

Some play golf—S. W. Quisenberry, of DuPont; R. G. Berlinghof, of American Monorail; F. M. Kimball, of Mandeville Mills; Tom Mott, of Corn Products. The last named took top golf prize.

Mr. & Mrs. Norman Elsas, Atlanta; and W. M. McLaurine, Charlotte, N. C., secretary of N.A.C.M.

Atlanta Textile Club's Tournament

At Atlanta Textile Club second annual golf tournament, Black Rock Club near Atlanta, first prize went to Robert A. McKay, Wellington Sears Co. Ransom Burts was in charge. (Left to right) W. H. Morrison, Wellington Sears Co.; Jno. Boyle, Eagle & Phenix Mills and Columbus Mfg. Co.; T. J. Smith, Riegel Textile Corp.; Robt. A. McKay, Wellington Sears Co.; H. C. Allen, Jr., Sterling Textile Co.; Ransom Burts, J. L. Stifel & Sons.

Cotton Promotion Meetings

Series backed by three groups held throughout the South

A SERIES OF REGIONAL MEETINGS was held throughout the South from June 10 to 19 under the joint auspices of the Cotton-Textile Institute, the National Cotton Council, and the American Cotton Manufacturers Association. The real purpose behind these meetings was to explain to the cotton manufacturers details of the working arrangement on cotton promotion recently perfected between the three organizations. The meetings were widely attended and created considerable interest.

President W. N. Banks of the American Cotton Manufacturers Association presided. Dr. Claudius T. Murchison, president of the Cotton-Textile Institute, spoke off-the-record on recent developments along legislative lines in Washington. The feature of the program was the summary of recent accomplishments on the part of the National Cotton Council as outlined by Ed Lipscomb, managing director of the Council, and explanation of the financial arrangement as discussed by Ray Blake, secretary of the Council. It will be recalled that the American Cotton Manufacturers Association has recently become the sixth integral part of the National Cotton Council, completing their picture of the cotton industry from the grower through the manufacturer. Thirty delegates have been appointed to represent the cotton manufacturers in Council affairs.

Every cotton mill in the South, whether a member of the American Cotton Manufacturers Association or not, is being urged to participate in the financial aspects of the cotton promotion program to be headed up under the three above-named organizations. The fee is 5¢ per bale on uncompressed cotton. This is specified because compressors pay 5¢ a bale on all that they process and there is no desire for duplication of fees. Mills which have signed up with the Cotton-Textile Institute on a 2¢ per bale basis for cotton promotion of course are privileged to deduct that amount which they subscribe to the Cotton-Textile Institute from their total fees due the National Cotton Council, and mills which use only compressed cotton pay nothing, although they are asked to sign a membership card. The entire program as far as the cotton industry is concerned hinges upon a 90% membership quota before the crop starts to move and efforts are being made at this time by representatives of the three groups to cover the field before membership deadline.

The regional meetings which were part of this drive were held at Raleigh, N. C., Charlotte, N. C., Spartanburg, S. C., Greenville, S. C., Atlanta, Ga., Columbus, Ga., Birmingham, Ala., and Chattanooga, Tenn.

Forms Research Division

New Cotton-Textile Institute bureau to be headed by J. T. Wigington

ESTABLISHMENT BY the Cotton-Textile Institute of a division of cotton research and appointment of John T. Wigington as its first director have been announced by Dr. Claudius T. Murchison, president. The division is being established at Clemson College in South Carolina. Mr. Wigington comes to his new post from the United States Agricultural Marketing Service at College Station, Texas, where he has been in charge of the cotton fiber and spinning research laboratories.

Stating that most of the fabrics and materials now competing with cotton in various applications "owe their success almost entirely to laboratory research," Dr. Murchison continued:

"The establishment of a division of research which will serve the entire industry is expected to bring to cotton the same degree of scientific attention which has been accorded to cotton substitutes. Its first function will be to survey all cotton research projects now under way in cotton manufacturing plants, college and university laboratories and Government agencies. This information, when assembled, will be analyzed and appraised and the findings made available alike to manufacturers and research specialists.

"A second function will be to coordinate existing research activities for the purpose of mutual aid and the avoidance of duplication.

"A third purpose is to ascertain in what directions research activities can be guided with the most beneficial results and to formulate projects which will have the greatest practical value to industry and to cotton consumption."

A graduate of Clemson College in 1923 with a BS degree in textile engineering, Mr. Wigington had begun his career in cotton at the age of 15 when he became a textile operative in Orr Cotton Mills at Anderson, S. C. Subsequently he rose to the position of mill superintendent, serving in this capacity the Seneca Co. (now Lonsdale Co.) and the Edna Mills Corp. at Reidsville, N. C. For a time he was associated with the Textile Bag Manufacturers Association where he completed several projects designed to improve the quality and widen the use of cotton bags.

He has written a number of technical studies relating to fiber qualities, to spinning methods and machinery, and to the appraisal of cotton varieties and the attainment of required yarn specifications. He is a member of the Arkwrights, Inc. which is a research organization of the Southern Textile Association, and is a native of South Carolina.

Research Plan Getting Under Way

Steering Committee of U. S. Institute perfecting arrangement with Foundation

THE INDUSTRY-WIDE PROGRAM for textile research is advancing on all fronts. The new working arrangement between the Textile Foundation and the U. S. Institute for Textile Research is being put, actually, to work. Under the direction of Edward T. Pickard, now joint executive officer of the Foundation and the Institute, plans are being laid for the aggressive prosecution of a real research program.

Latest developments include:

1. Fessenden S. Blanchard, of Pacific Mills, newly-elected president of the U. S. Institute for Textile Research, has appointed as a Steering Committee for the Institute the special committee which developed the plan, composed of Mr. Blanchard, Mr. Pickard; Dr. Robert E. Rose, of E. I. du Pont de Nemours & Co., a vice-president of the Institute; Dr. Harold De Witt Smith, of A. M. Tenney Associates, treasurer of the Institute; and Douglas G. Woolf, editor of TEXTILE WORLD.

In his letter to members of the Institute, advising them of the appointment of this committee, Mr. Blanchard said, "This committee will attempt to work out a long-run research program on which suggestions from leaders of the industry will be asked. The committee will, of course, appreciate greatly any suggestions along these lines from our members. The committee will also accept the aid of a special committee to study whatever revisions in the by-laws may become necessary in order best to conduct and finance this research and carry out the purposes of the new plan."

Cooperating with the Steering Committee, on all matters affecting both the Institute and the Foundation, will be a special committee of the latter composed of Franklin W. Hobbs, president of Arlington Mills and chairman of the Textile Foundation; and Frank D. Cheney, of Cheney Bros., and Donald Comer, of Avondale Mills of Alabama, both directors of the Foundation.

Referring to the new working arrangement between the Institute and the Foundation, Mr. Blanchard stated: "I feel sure all the members will feel that the new arrangement is greatly to the advantage of our organization as well as to the advantage of the Textile Foundation, and through both groups to the textile industry and the public which it serves. With the cooperation of our members and the increased support from the industry which we hope to obtain, we are confident that real progress in textile research will be made."

2. A Committee on Publications and Publicity has been appointed consisting of Douglas G. Woolf, editor of TEXTILE WORLD, chairman; Earl Heard, dean of the Philadelphia Textile School; Dr. Louis A. Olney, of Lowell Textile Institute; Dr. E. R. Schwarz, of Massachusetts Institute of Technology; and Stanley B. Hunt, of the Textile Economics Bureau. This committee will not only decide the form of the organ which will replace the bulletin *Textile Research* at the end of the present fiscal year, but will also be responsible for the publicity and promotional program reflecting to the industry at large the research accomplishments of both the Institute and the Foundation.

3. The Research Council of the Foundation, under the chairmanship of W. D. Appel, of the U. S. Bureau of Standards, is working closely with the Steering Committee in the development of long-range research plans.

It is hoped that a definite program covering all these points will be in shape for submission to the members at the annual meeting in November.

Headquarters office of the Institute has been established at 10 East 40th Street, New York.

Photos by Daily News Record

AT HEAD-TABLE of Textile Square Club luncheon, marking the launching of the new research plan, and paying tribute to E. T. Pickard, secretary of both the Textile Foundation and the U. S. Institute for Textile Research. Left to right: Mr. Pickard; Harry Riemer, president of the Square Club; Franklin W. Hobbs, president of the Foundation; W. D. Appel, chairman of the Research Council of the Institute; and D. H. Powers, a director of the Institute.

ANOTHER GROUP at the head table: Dr. Harold De Witt Smith, treasurer of the Institute; Ephraim Freedman, a director of the Institute; Douglas G. Woolf, member of the Steering Committee of the Institute; A. W. Williams, dean of Wharton School; and Fessenden S. Blanchard, president of the Institute.

Collins & Aikman Corp.

Canda cloth upholstery graces interior of this popular 1941 Buick

Fabrics Gain as Auto Sales Point

As mechanical changes diminish, fittings rise in importance; New 1942 fabrics

By WILLIAM B. DALL
Managing Editor, TEXTILE WORLD

AUTOMOTIVE FABRICS in preparation for the 1942 motor car season show normal style progress on the basis of the 1941 fabrics with further development toward novelties in some quarters. Although not yet disclosed, more positive changes may be on the threshold.

The facts which suggest that this season or possibly next may be a turning point in textiles for car interiors include: (1) the necessity of motor manufacturers giving newness of appearance without much tooling up in their own plants for new body styles; (2) the keen selling job which some believe these firms must undertake to move even the radically reduced output next season after the record consumer absorption during the last six months; (3) the increasing cost and growing scarcity of some types of fabrics or of raw materials; (4) the gradual spread to rural areas of the urban interest in different trim treatment from that long customary; (5) eventual launching of new fabric constructions which have been under development for some years.

Collections of fabrics which have lately been shown on the Detroit market include the flat, corded and pile constructions popular in the current season, but buyers for motor firms are taking more definitely striped effects than last year and lighter colors. Among the colors favored are beige, fawn, gray, russet, green and blue. Use of two colors or two styles in combination is becoming the rule; the seat upholstery for example may be of darker tone or attractively striped, while the side walls and ceiling may be of lighter tone or of a complementary color, usually in a plain effect. The darker tones make car interiors look smaller than do the lighter tones, but designers are putting the darker colors in smaller cars without their previous inhibitions on the subject. It is a fairly general rule, however, that the side walls and ceilings are lighter than the seats.

Among the novelties, wider stripes than heretofore will be used, for, in addition to pencil and chalk stripes, are to be found stripes as wide as $\frac{5}{16}$ in.

Typical of the color diversity already current in automobile upholstery is the spray of fabric flowers shown on the front cover. These fabrics are from the line currently used in Chrysler cars. We use the illustration by courtesy of the Chrysler Sales Corp., Detroit, Mich. It appeared in the advertisement prepared for consumer magazines of April, 1941, by Lee Anderson Advertising Co.

Plaids will be shown, but it is difficult to say how much further they will go than last season. One such effect has been seen in a printed finish on a pile fabric. The usual taupe Bedford cords are enlivened with touches of color in the grooves between the cords, or with weave variations which break the regularity of the cords themselves.

By these and other devices the car maker can gain the appearance of newness in models which, for defense program reasons, will be largely mechanical repetitions of the current season. The upholstery will probably be called upon in coming months more than at present to signalize a new model and to impress favorably the prospective car buyer.

Pile fabrics are estimated to be used in about 75% of the cars, with flat goods, including plains, twists and cords in the remaining 25%. Canda cloth, originated by Collins & Aikman Corp., accounts for a growing proportion of the pile fabric group. This type of fabric was designed to get away from the older plushy types and at the same time to retain the wearing and cleaning attributes of those fabrics. Use of Canda cloth as a generic name avoids dilemmas in calling the fabric by any fiber name, when, in fact, a number of fibers are used together in fabrics of this family to produce the desired optimum results. Compulsory fiber-content labeling is not involved, since upholstery and carpet fabrics are explicitly excepted from the Wool Labeling Act.

Up to time of writing, there has been no unsolvable raw material problem in automotive fabrics. Mohair is not being used to any extent in defense fabrics, nor are pile fabric looms generally in demand for Army goods. There is still ample foreign wool, which is discriminated against in uniform cloths. Looms on flat goods may be capable of turning out defense fabrics, but so far there has been no preempting of *all* suitable machinery, and textile mills still have a portion of their production to distribute among their regular customers.

Use of synthetic fibers for automobile upholstery, reported close to achievement at the time of the auto show last fall, is still in the offing. These fibers remain a sort of ace in the hole in event that wool is strictly allocated against war needs at some later date. The attractive carpet textures already made from synthetics promise suitable car upholsteries from the same sources when desire, price or stark necessity bring them out in commercial quantities. In these developments casein fibers may play an important part.

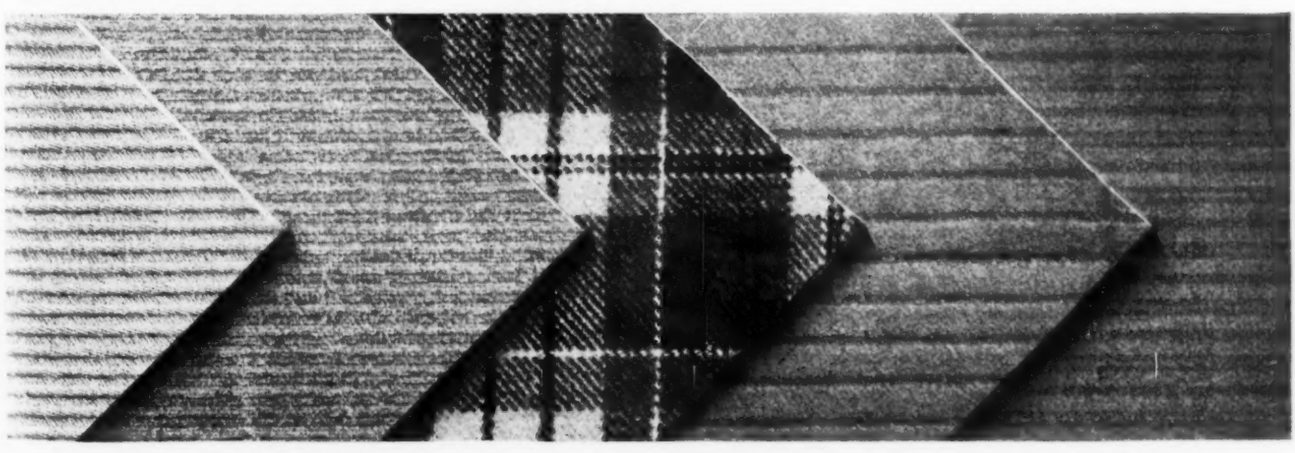
Simulated fabrics would be available if wanted, and several with fibrous face attached by adhesives have been in experimental use. Flock may be sprayed directly on metal for a fabric effect on side walls or compartment linings.

THE PRIME REQUISITE among car manufacturers' requirements for interior fabrics is that the upholstery must last for the average life-expectancy of the car. For that reason the car designer does not toy with the quality of his fabrics, and puts from $40 to $70 worth into an average sedan. It is also true that there is little difference in the cost of materials that go into all the cars of the middle and lower price brackets. The highest brackets use richer and more costly fabrics, but not necessarily more durable. The sleek, soft, broadcloth of the top-notch town car would probably not give as good performance in the rough and tumble treatment given cheaper cars as do the cords, twists and pile fabrics found in them.

Car manufacturers do a lot of talking about various special finishes which might be applied with advantage to automobile cloths, but, when it comes to the purchase, few are ever specified. Broadcloths are often spot-proofed, but such finishes as flame-proofing, moth-proofing, waterproofing, etc., are rarely applied. The nearest thing to any of these is the latex-treated back which is used in many of the pile fabrics. This renders the fabric approximately impenetrable by water, although there are pores in the fabric which permit "breathing." The rubber back also adds greatly to the fabric's strength, locking the pile into the backing. Such fabric protects the inner upholstery from liquids spilled on the surface and facilitates surface washing. One car manufacturer is reported to have looked into the Sanitized (or germ-proof) finish for his upholstery, but didn't buy it.

Current news stories tell of manufacturers' expectation that there will be much "re-treading" of existing tires if rubber scarcity makes itself felt—similarly there may be a fair volume of reupholstery jobs if new passenger car production is restricted beyond this season's initial 20% cut. Existing passenger car registration in the United States totals about 27,000,000 cars, of which 8,500,000 are more than five years old. Fabric men right now doubt any reupholstery business large enough to affect the market; they argue that slip covers are the economical substitute for poor upholstery.

The 1941 production schedule calls for 5,385,000 cars in the year ended Aug. 1, 1941. At an average of 15 sq. yd. per car, this has consumed over 80,000,000 yards of upholsteries. The already-ordered cut of 20.15%, which is effective on Aug. 1, means a production of 4,200,000 cars in the 1942 season, but the feeling is current that, due to alloy scarcity, the cut from the 1941 season's production rate may reach 50% by Jan. 1, 1942. Parallel cuts in consumption of automotive fabrics would obviously ensue, but textile men catering to this trade do not seem to be worrying about this, taking it as just another ramification of world conditions and the defense program.



Group of typical pile and flat fabrics among the recent best sellers (shown about half-size)

STA Keys Program to Present Need

Myrtle Beach meeting hears papers on training workers, cotton tests, defense

J. O. Thomas, newly elected president of STA and Mrs. Thomas

Frank D. Lockman, retiring president of STA delivers brief address

ONE OF THE SNAPPIEST and most timely convention programs of the season was that of the Southern Textile Association which held its annual meeting recently at Ocean Forest Hotel, Myrtle Beach, S. C. The three major addresses—(1) A Training Program for Machinists, (2) Results of Some Cotton Spinning Tests, and (3) Prevention of Sabotage in Industry—were short, concise, informative and fruity. The program was further rounded out with addresses by the president of the association and the Governor of South Carolina.

Probably the most unique presidential address on record was presented by Frank D. Lockman, retiring president, who spoke for approximately two minutes—and yet struck the nail squarely on the head. He said that during the first World War many mills had to cut wood to keep running when the coal gave out, but that the sacrifices made then were child's play as compared to the sacrifices we are going to make in the future. "Loyalty to the Nation is essential," he said, "even if we have to use a hammer to get it!"

Mr. Lockman's remarks were amplified by Governor B. R. Maybank, of South Carolina, who spoke on the future industrial development of South Carolina in terms of National Defense, stressing the importance of the Santee-Cooper power project which is nearing completion. With reference to the international situation, Governor Maybank urged that we convoy goods to Britain whose position is becoming worse by the day. He said that there has been only one small strike on defense work in South Carolina which was quickly settled with no rioting, and implied that he would do everything in his power to prevent future strikes in defense industries, which strikes he described as criminal. Although an exponent of collective bargaining and the wage-hour law, Governor Maybank bitterly condemned the labor-union racketeers who are demanding exorbitant wages while the men in the Service are giving their time and possibly their lives for $21 a month. He concluded with a suggestion that men like Lindbergh and Senator Wheeler be muzzled for duration of the emergency.

David Clark, editor of *Textile Bulletin*, spoke briefly on a recent visit to Washington wherein he learned that the National Defense Program is progressing somewhat better than the general public realizes, although the emer-

E. A. Terrell who spoke on school system for training workers

Ernest J. Eaddy, retiring chairman of Associate Members Division STA

Malcolm E. Campbell who spoke on Government cotton spinning tests

gency is expected to last until 1944 at least. Mr. Clark, personally opposed to the New Deal, spoke sympathetically of President Roosevelt's problems and complimented Sidney Hillman's sincerity.

Edgar A. Terrell, president of Terrell Machine Co., Charlotte, N. C., described in detail a school for training machinists which he inaugurated in March, 1940, at his plant. Using ICS courses and special instructors, the school was said to be "already on a self-supporting basis" due to the fact a substantial amount of production work and many tools are produced by the apprentices. A number of the students are operating production machines and some of them are capable of doing better work than many poorly-trained machinists with years of experience, he said.

Apprentices are started at 30c. an hr., and given an increase every six months as progress is made. A contract calls for specific rates of increase, but those rates are regarded as a minimum and in most cases the company is paying considerably more due to rapid advances in skill of the students.

In addition to mechanical training, the apprentices also are given courses in blue-print reading, mechanical drawing, English, industrial economics, mathematics, etc. The apprentice is required to have a high-school education before enrolling. (For abstract of Mr. Terrell's paper, see page 114.)

Mr. Terrell's school has no connection with the North Carolina vocational system, although the standards are said to be well above State requirements. He believes that the apprentice shop on the average will turn out as good a mechanic in two years as the same man would be after four years under the old system.

John Turner, newly elected president of Associate Members Division

Speaking on "Some Spinning Test Results of Interest to Manufacturers," Malcolm E. Campbell, senior cotton technologist, U. S. Department of Agriculture, discussed irrigated versus rain-grown cotton, drying cotton before ginning, compression of bales to different densities, cutting of bales during compression and tests of a triple-hybrid cotton. A brief summary of his remarks follows:

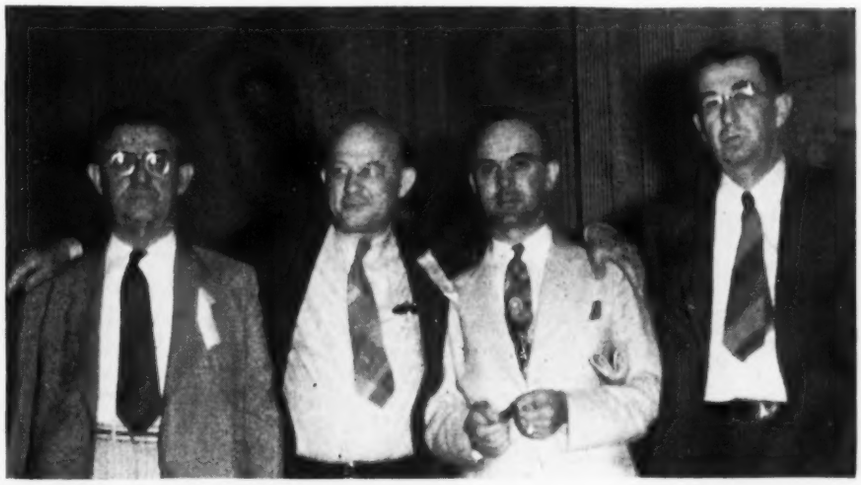
After testing 20,000 samples of irrigated cotton, it was learned that yarns made from irrigated cotton compared favorably with rain-grown cotton of similar grade and staple except in the matter of appearance wherein the former is definitely poorer. Dyeing qualities are equally good, but they are different, which makes uneven yarn when the fibers are mixed. It was pointed out that these results represented only one crop year and additional tests would have to be run before definite conclusions could be reached.

Drying wet or "green" cotton before ginning has no appreciable effect on strength, and grade is improved, so long as recommended temperatures of around 160° F. are employed; above 200° F. there is a distinct deterioration.

So-called "air-cuts" in cotton bales resulting from compression of bales do not have any appreciable effect on quality of yarn produced from a 500-lb. bale. An investigation showed that these cuts actually are made by the shearing action of adjacent portions of the bale which vary in density rather than by escaping air as commonly supposed.

A new triple-hybrid cotton produced by crossing an Asiatic cotton with an Upland variety has recently been test-spun into 22s yarn with a skein strength of 166 lb., 45% stronger than the average figure obtained for commercial cottons of the same length. It will be years, however, before enough of this cotton is available for real commercial testing.

At the business session, J. O. Thomas, personnel director, Manufacturing Division, Marshall Field & Co., Spray, N. C., was elected president of the association for the next year. Robert T. Stutts, superintendent of the Simpsonville and Fountain Inn plants, Woodside Cotton Mills Co., Greenville, S. C., was elected vice-president. T. C. Pegram, Erwin (N. C.) Cotton Mills Co., became chairman of the board of government. Marshall Dilling was re-elected executive secretary.



(Left to right) Marshall Dilling, executive secretary of STA; Frank Lockman; Robert T. Stutts elected vice-president; T. C. Pegram, elected chairman of board of government

New directors are Eddie Seagle, B. M. Bowen, J. H. Holder and V. E. McDowell.

Officers of the Associate Members Division elected to serve during the next year are John Turner, of Charles Bond Co., Atlanta, Ga., chairman; Falls Thomason, of New York & New Jersey Lubricant Co., Charlotte, N. C., vice-chairman. Junius Smith, of *Textile Bulletin*, Charlotte, was reelected secretary and treasurer.

Golf prizes: Membership—low gross, J. O. Lindsay, 83; second low gross, Gordon Cobb, 84; low net, M. W. Rogers, 69; second low net, Newton Hardie, 70. In the Associate Members' tournament, Ed Reid won low gross with a 78 and Jim Henderson took low net with 68. Second low gross was won by Fred Sails with 81 and second low net by F. E. Bozeman who shot a 69. Blind bogey went to Harry Dalton and consolation to Tommy Nelson.

V. E. McDowell and R. P. Bullock were winners of the horseshoe pitching contest.

Rayon Shantungs Hit the Style Top

And are likely to stay there during next spring season, rayon men say

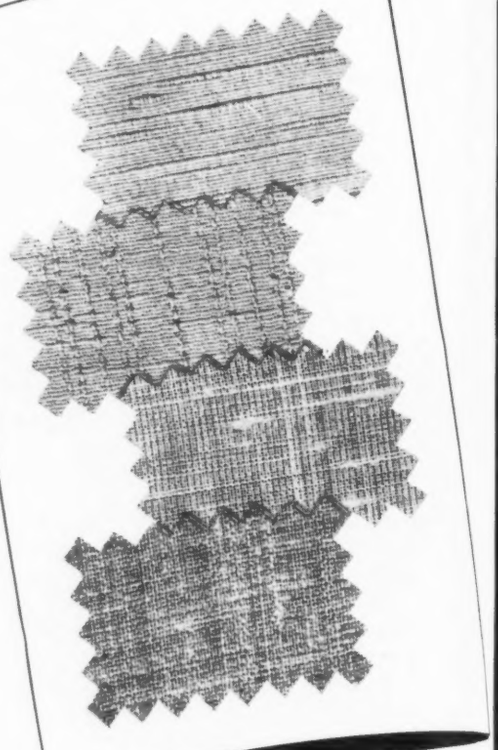
A BRIGHT FUTURE for shantungs is predicted by rayon fabric development men. So great has been the popularity of slub-yarn filled fabrics during the current season that it is taken almost for granted they will be good for Spring, 1942. Shown herewith are some of the newer shantung developments. Study of the illustrations and accompanying construction data should give mill men an idea of the type of fabrics likely to be important. It will be noted the cloths shown are all solid shades. These basic fabrics, however, will continue to be used not only "as is," but also as bases for printed patterns, flocked dots, etc.

Warp: 100-den., 34-fil., dull acetate rayon. Filling: 24/1 (silk count) spun viscose rayon doupionni-type crepe, 40 t.p.i. Construction: 135x56, 45/3/1 reed, 45½ in. reed width. Filling laid 2S, 2Z.

Slub filling combined with warp stripes formed by periodic use of heavier warp yarn. Warp: 150- and 600-den. dull acetate rayon. Filling: 70/1 spun viscose rayon, twisted with 22/1 spun viscose rayon and cotton blend (both cotton count). Construction: 111x44, 42-in. reed width.

Sheer, with flake yarn filling. Warp: Blend of 75% viscose rayon staple with 25% acetate rayon staple. Filling: 24/1 (cotton count) 100% viscose rayon staple.

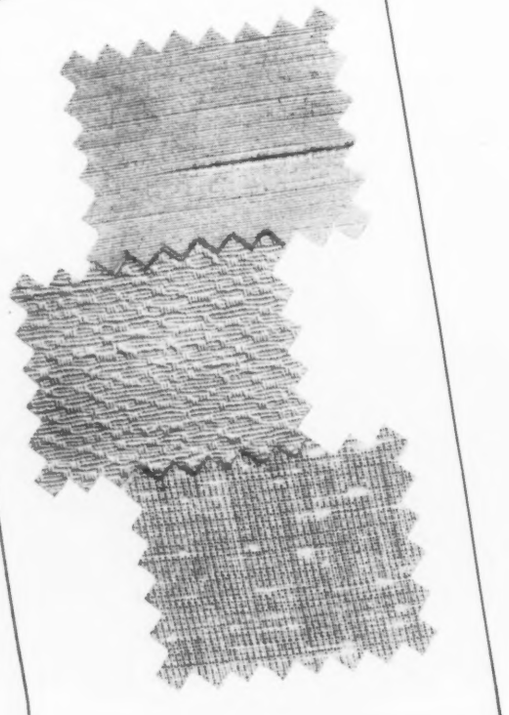
Slub yarn used both warpwise and fillingwise. Warp and filling: 18/1 (cotton count) blend of viscose and acetate rayon. Construction: 48x42, 44 in. reed width.



Warp: 100-den. viscose rayon. Filling: 24/1 (cotton count) spun viscose rayon, 4.7 twist multiplier. Construction: 138x64.

Slub filling combined with dobby weave. Warp: 150-den. dull acetate rayon. Filling: 15/1 (cotton count) spun viscose rayon. Construction: 111x50, 41 in. reed width.

Sheer. Warp: Spun blend of 75% viscose and 25% acetate rayon. Filling: 24/1 (cotton count) spun viscose rayon crepe doupionni.



Fabrics For National Defense

Army calls for 20-oz. woolen suiting; revamps cadet overcoating specification

THE ARMY IS CALLING for large quantities of 20-oz. woolen suiting in spruce-green color for use in uniforms of the Civilian Conservation Corps. Recent invitations asked for bids on over 2,000,000 yd. This cloth is covered by specification No. 8S-39A, with the exception of the color; and it is the Class C, or woolen, fabric the army wants. Applicable specifications are abstracted below, and additional manufacturing data not in the specification are given.

Stock—Fleece and/or pulled wool, not lower than 50s grade. Use of reworked wool, card strippings, card fly or similar waste prohibited; except that not over 10% garnetted waste may be used. This waste is limited to that produced during manufacture of the particular fabric in question.

Yarns—Single, spun on woolen system. [Although not stated in the specification, use of 4.4-typp (2¾-run, 14⅔-cut) yarn for warp, and 5.2-typp (3¼-run, 17⅓-cut) yarn for filling—with the loom set-up detailed below—should yield a fabric of correct weight.]

Physical Requirements—Weave, 4-harness, two up two down, right-hand twill; finished width, not less than 56 in., exclusive of selvages; finished weight, based on 56-in. width, not under 19 oz. or over 21 oz. per linear yd.; minimum ends and picks per inch, finished, 46x44. [Although not stated in the specification, using yarns listed above, 2,646 warp ends (plus selvage) reeded 4 ends per dent in a 9-dent reed 73½ in. wide, and 38 picks per in. at the loom, should yield approximately correct finished cloth.] Minimum breaking strength, warpwise, 70 lb.; fillingwise, 60 lb.

Color—Spruce green, produced by blending white and dyed wools. Must have good fastness to crocking and to weather; for the latter test, samples to be exposed for 10, 20, and 30 days.

Finish—Thoroughly scoured and properly fulled, free from vegetable matter; face evenly sheared and well pressed.

FLYING CADETS overcoats will henceforth be made of olive-drab doeskin instead of the blue shade formerly specified. A tentative specification covering the new standard fabric was issued a few months ago by the Quartermaster Corps. It is designated P.Q.D. No. 30. Below are suggested construction and manufacturing data, together with essential data abstracted from the specification.

Stock—Fleece and/or pulled wool not lower than 64s grade. Use of noils and/or reworked wools prohibited.

Yarns—Single, spun on woolen system, same yarn for both warp and filling. [Although not stated in the specification, use of 4.8-typp (3-run, 16-cut) Z-twist yarn, with the loom set-up detailed below, should yield a fabric of approximately correct weight.]

Physical Requirements—Weave, 5 harness warp satin, using counter of 3; finished width, not less than 56 in., exclusive of selvages; minimum finished weight, per linear yard, 26 oz.; minimum ends and picks per inch, finished, 78x48. [Although not stated in the specification, using yarns listed above, 4,400 warp ends (plus selvage) reeded 5 ends per dent in an 11¼-dent reed 80 in. wide, and 42 picks per in. at the loom—with the finishing procedure detailed below—should yield approximately correct finished cloth.]

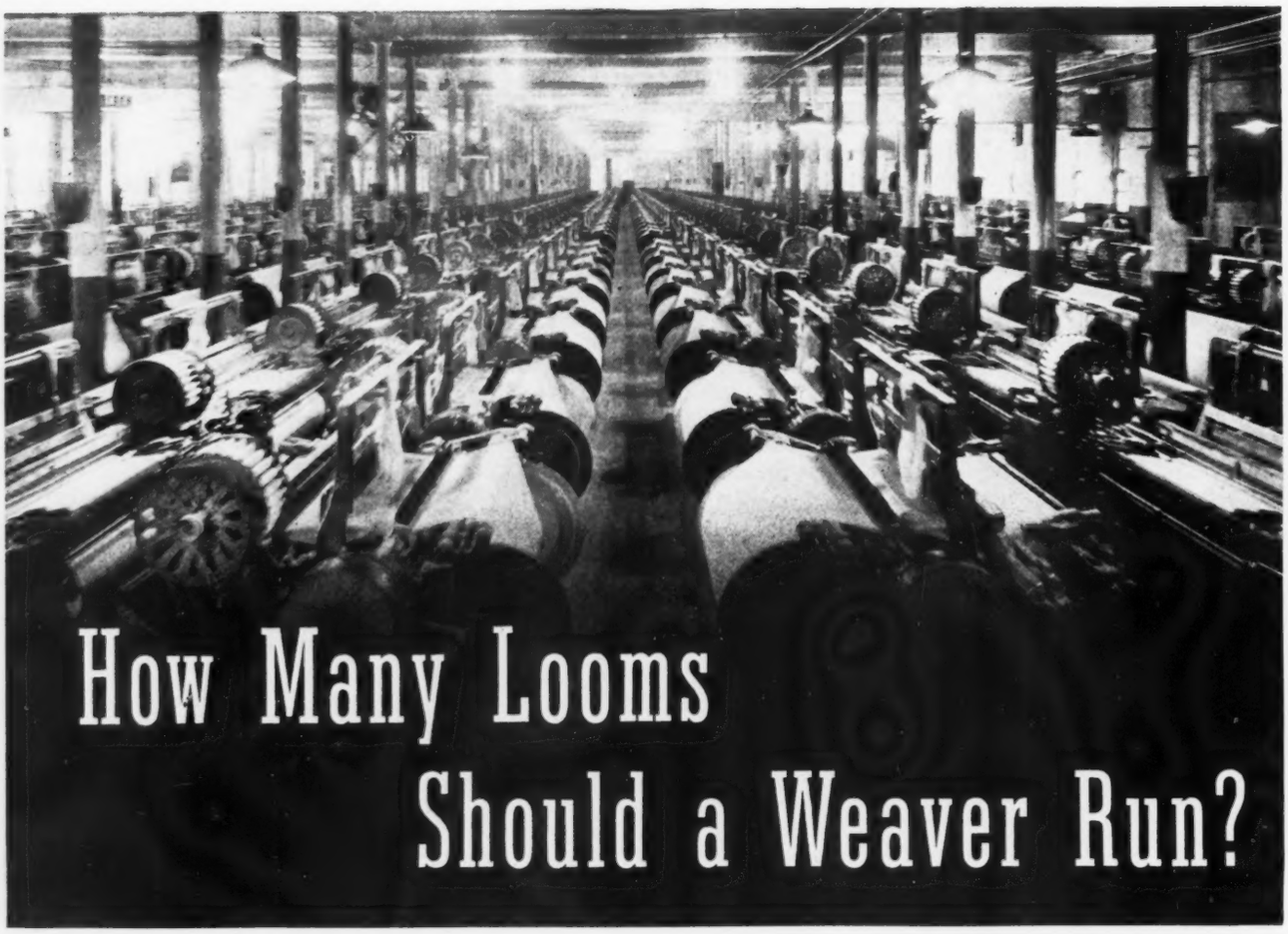
Minimum breaking strength of finished fabric, 1x1x3 grab test—to warpwise, 85 lb., fillingwise, 70 lb.

Color—Olive drab, produced by blending olive and white wools. Must show good fastness to weather.

Finish—Thoroughly scoured and properly fulled; free from vegetable matter; face closely and evenly sheared; well pressed; lustrous, well developed face finish. Use of finishing or loading materials to increase weight or strength prohibited.

[Although not included in the specification, a suggested finishing routine is as follows: Scour thoroughly; full to 58 in. wide and approximately 20% in length; carbonize if necessary; teasel gig, very wet, to required cover; dry; shear. Steep 45 min. at 160° F.; allow to cool; rewind from opposite end of piece and re-steep; cool again. Steam brush; shear to required length of cover; hot press; steam and brush lightly, in direction of nap. It is pointed out that the term "doeskin" is sometimes loosely used in the trade, and therefore suggested that mills planning to bid on this cloth secure from the Quartermaster Corps a sample showing the required finish, in order to determine whether any modification in the above routine is desirable.]

Flying cadets are cadets only while learning; after that they're in the Army. So the boys can keep on wearing the same outfits, QM has begun to specify olive-drab uniforms, instead of cadet blue



How Many Looms Should a Weaver Run?

By EDMUND A. LUCEY
Consulting Engineer, Manchester, Conn.

THE DETERMINING FACTOR in deciding how many looms a weaver should run is neither the wage cost nor the amount of work that a man can do in a day. The real things to determine are: (1) how to make the weaver's time as available as possible so that he can do the necessary work right after a loom stops; (2) how to get the highest production that is possible from each loom that a weaver runs, and (3) how many looms a weaver can run at the production which will show the lowest total cost per yard.

Formerly, the cost of owning and maintaining a cotton loom in readiness to run varied from mill to mill from $1 to $1.50 per day. When weavers ran two looms and received $2 per day for wages, the wage cost per loom was nearly equal to the loom expense and was quite a sizable part of the total cost per yard. Knowing this, one can easily understand why the mill owners checked their wage costs constantly.

The costs of owning and maintaining are higher today than formerly. For the purpose of example only, it will be assumed that the loom expense is $2 per loom per day. It is fair to say that cotton weavers in the South average around $3.50 per day, although the amount varies in different sections. When a weaver is given 40, 50, or 60 looms to run, there is a wage cost per loom of $8\frac{3}{4}$, 7, or just under 6c. per loom. With a loom expense of $2, and a wage expense of 6c., the relation of wage cost to loom expense has been changed to a point where the wage cost is a very small part of the total cost.

Because of the emphasis placed on wage saving, the rate setters went about their job on the basis of finding out how much work a weaver could do in a day, and how many looms it would take to give him that amount of work to do. Time studies were made to find out how long it takes to piece up an end when a warp thread breaks, how long it takes to start up a loom after a filling thread break, etc. Then studies were made to find out how many ends broke per loom per day and just what other things had to be done. When all these things were known, a decision was made as to the number of looms a weaver should be given. Then all the weavers were told that they had to run that many looms.

This whole basis of figuring was wrong; and the dissatisfaction among employees over, and the large amount of adverse publicity given to, the so-called stretch-out system can be traced to the wage consciousness of the mill owners and the methods used by those entrusted with the job of rate setting. We firmly believe in modern management methods and believe that proper rates can only be set after detail studies. But there is a great difference in the way studies can be made and in the use that can be made of the information developed from them. Put to good use it can mean increased production, increased wages, decreased cost, and both owner and employee satisfaction. When it is mishandled, low production, no increase in wages, increased cost, and employee resentment will be the results.

THE AMOUNT OF TIME-STUDY work needed to be done in studying a weaving job is very small. The number of different things the weaver has to do is very limited, and the amount of time taken on each thing is very short. It

Abstract of a paper presented recently before the senior engineers' class in business administration at Lowell Textile Institute.

takes less than a minute to piece up a warp end, whether the break is in front of, or behind, the harness. It also takes less than a minute to start up the loom if it has stopped because of a filling break. After these times have been once determined, they can be used over and over again, even in a different mill.

When this actual time study work is completed, the remainder of the work is an observation study, to find out the number of things that happen per loom per day and what causes them to happen. Long experience has proved that a good loomfixer or a good weaver can make this part of the study far better than any time-study engineer, or clerk, who is not a weaver. First, these men know the job so well that the reason for each loom stop is apparent to them immediately. Second, they are known to the other workers and their knowledge and the result of their observations are respected.

Management engineers have made great contributions to the modern methods used in many industries, including the textile industry. But a management engineer's work should only be that of a consultant or an adviser to any company's own organization. No outsider should ever be allowed to do work with the employees in the production departments, as friction with both the supervisors and the workers too often results.

When we have, from a study, a fair average of the number of things that may happen and know how long it will take to fix each of these things if it does happen, we have an interesting example in arithmetic in front of us. By observation studies, on any type of fabric, one can determine the average number of times the loom will stop in a day. But yarn is of such a nature that one cannot determine, by any amount of study, when a stop from a break will occur. If it is found that eight stops per day are to be expected, it still is not known whether there will be one stop per hour for each hour in an 8-hr. day, or all eight stops in any one hour. If a weaver had but one loom to run and there were only eight stops per day, then he would be right at the loom when each of the stops happened, and there is no reason to doubt that he could do the necessary work in 8 min. If the loom was stopped 5 min. more during the day, because of adjusting, there would be total stops of only 13 min. out of the 480 min. available time. Under such conditions the loom could show a production of 97%.

It is a fact, however, that when a weaver has two or more looms to run, there is an entirely different condition. The changed condition comes about through the possibility of another or several other looms stopping while the weaver is already working on one that has stopped previously. Then the time that the second loom is going to be stopped is the time that it takes to finish working on the first loom, plus the time that it takes to get to the second loom, plus the time that it takes to work on the second loom. The time that a third, a fourth, and other looms will be stopped is easy to figure. If there are many times in the day when four looms are stopped at one time, it is safe to say that the weaver has more looms than he can run to advantage.

"INTERFERENCE" is the term used for the time that is lost by a loom which is stopped while the weaver is working on other looms; and it is this interference that limits the number of looms that can be run efficiently. For example, when a weaver has a set of 60 looms, there are times when 5, 10, 15, and more, are stopped at one time. If it takes the weaver 1 min. to start up a loom, then the 15th loom will be stopped at least 15 min. With 60 looms, there are 1,770 combinations of two looms taken at a time, 34,220 combinations of three looms taken at a time, 487,718 combinations of four looms taken at a time, etc. There are all these possibilities of more than one loom being stopped at a time, and they must be taken into consideration in figuring how many looms a weaver should be asked to run.

It is impossible for anyone to study interference accurately on very many looms. To study it on a limited number will not help if one is reasonably sure an operator can run a greater number. The conditions will be so changed by adding one or two more looms that the information one already has will be without value. But while it is impossible to study the interference of a large number of machines, it is possible to figure it quite accurately for any number. To figure it, it is necessary to have from a detail study only: (1) the time that it is necessary for an operator to work on one machine when there is no interference from others; (2) the actual time that it is possible for the machine to run, and (3) the production that the machine would then show.

After years of study we have developed a formula based on the laws of probability for figuring interference on multiple machine jobs. By showing the interference time that must be allowed for any number of looms, the formula is an aid to our judgment in determining the number a weaver should be asked to run. But the correct measure will always be the cost of producing a yard of cloth or a per-cent of production.

Whether the weaver has been assigned 60, 50, 40, or 20 looms, 80% is a high production for any mill, where rates have been set by the usual method, and many mills do not get 80%. A much higher production is often claimed, but every time that we have made a check-up we have found something about the method of figuring that explained the difference. In speaking of production of a weaving department of a mill, we refer to all the looms, with no time out for warp changes, pick-outs, or loomfixing. We also figure picks thrown or yards woven against what is possible for the total time run and not just part of it.

LOOM COSTS. If, for example, a weaver earns $3.50 per day, or roughly 6c. per loom per day while running 60 looms, and the loom expense is $2 per day, the cost per loom per day is $2.06. With a production of 80%, the cost of 1% of production is 2.575c. If the same weaver can get 90% production if he runs 40 looms, the cost per loom per day is $2.0875, and the cost of 1% of production is 2.318c. In case the weaver cannot get 90% production if he runs more than 30 looms, it will pay to have him run 30. The cost per loom per day with a 30-loom stand is $2.1133 and the cost of 1% production is 2.353 c.

By the same method of figuring, it can be shown that on types of fabrics which show few loom stops per day, it pays to limit the loom sets to the number on which a weaver can show a production of 93 or even 94%. A production of 95% on a multiple-loom job of more than 10 looms can be shown to be next to an impossibility, as the interference time per loom would have to be cut down to a figure not over the weaver's working time.

If, by limiting the number of looms in a weaver's set, there is left free an amount of time when all his looms are running, it can be put to very good use. Most any amount of time spent behind the looms is worth while, as clearing warps at the leases, trimming long ends from knots, and removing slubs will cut down the number of breaks and improve cloth quality.

Correcting the mistakes of the multiple-loom system will bring an advantage to all parties. Mill owners can get a production increase of 10% or more, without an increase in investment, and can at the same time get all production at a lower cost per unit. Weavers can go back to weaving, and not be confined to a knot tying job.

Research and Control Laboratory

Permits close check-up of all processes and manufactured products at Trion Co.

View of physical laboratory; Taylor Fulscope controller-recorder mounted on wall; note Anemostat on ceiling and lighting units

General view of chemical laboratory

TO PERMIT A CLOSE CHECK on all manufacturing processes and the company's wide variety of manufactured products, the Trion (Ga.) Co. has recently completed and put into operation a modern, well-equipped research and control laboratory. The laboratory, which is under the direction of William J. Harrison, has two rooms—one for physical testing, and the other for chemical work and research—plus an office and library. The space occupied was generously apportioned with sufficient over-capacity to permit installation of additional equipment which may be found necessary in the future.

In the physical laboratory the temperature is maintained at 70° F. with a relative humidity of 65%, (70° F. dry bulb; 62¼° F. wet bulb). A Parks Cramer standard laboratory air-conditioning unit was installed. This unit is equipped with a circulating fan having a capacity of 2,000 cu. ft. per min., General Electric heaters are used for heating air and spray water. Direct-expansion cooling and de-humidifying coils are supplied by a 5-hp. Westinghouse condenser unit. Spun-glass air filters are installed in the path of circulating air currents. Taylor Instrument Cos. Fulscope controller-recorder of the wet- and dry-bulb type provides fully automatic 24-hour graduated control, with charts giving a record of exact conditions at all times.

Special care was required to prevent undesirable effects of draft, both from the standpoint of comfort and its effect on the samples under test. This problem was solved by the use of a ceiling-type Anemostat, manufactured by the Anemostat Corp., which uniformly diffuses the incoming air currents. Proper return air ducts for recirculating, and fresh air intakes are provided.

This room contains an Emerson conditioning oven with power exhaust; H & B American Machine Co. automatic roving tester; Scott cloth tester, skein tester, and single-strand yarn tester; Brown & Sharpe reel and yarn balance; an abrasion testing machine, provided with abrasive-lined cylinders held against 1-in. strips of test material, with tension and pressure adjusted by positive weights and with strokes recorded by Bristol counters.

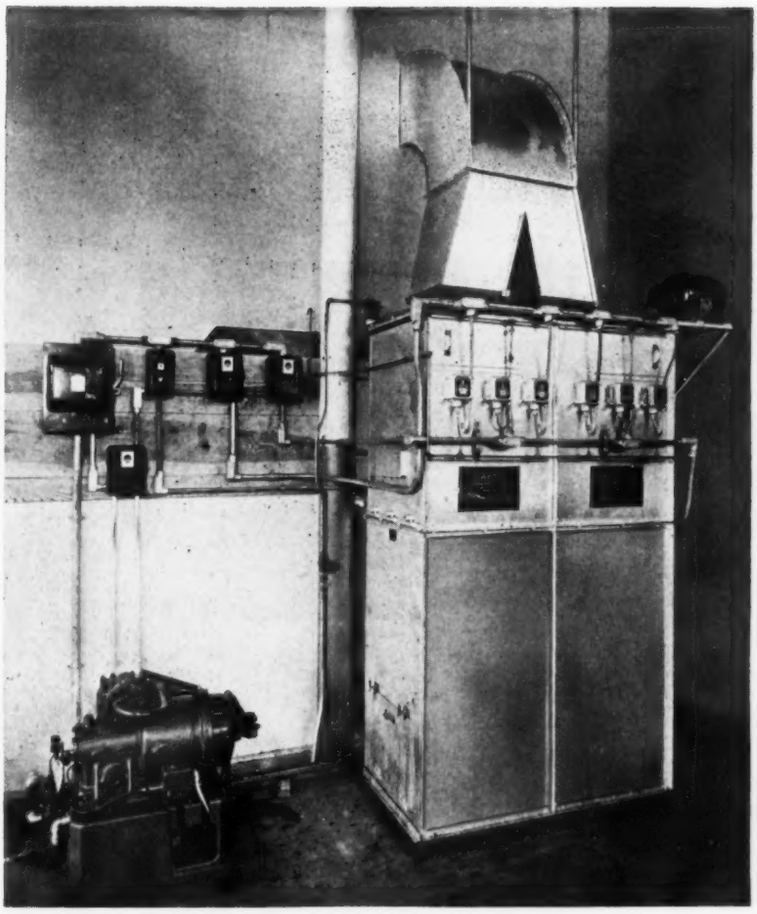
Samples from each style of cloth manufactured at the plant, consisting of over 75 separate constructions, pass through this laboratory once a week for tests. Materials in process are also tested daily for quality, uniformity, etc., at the various stages of manufacture. Reports are made to the superintendent and the overseers, enabling them to maintain a closer control on the quality of their production.

The importance of conducting these tests under controlled atmospheric conditions can readily be appreciated, when it is realized that field tests conducted in the plant under different conditions of temperature and relative humidity will produce different results. For instance, carded 20s yarn at 5% regain will give a skein test strength of 92 lb. The same yarn at 7% regain will test 102 lb., an increase of approximately

10.9%. The only variable here is the moisture content. Obviously, unless tests are made under the same conditions of regain, the results cannot be accepted as reliable, and it is not unreasonable to expect regain conditions in the mill to vary from 5% to 7% from day to day.

THE CHEMICAL LABORATORY is well-equipped and handles a wide variety of work. This range includes work for the bleachery, dyeing and finishing plant, gray mill, glove factory, knitting mill, farm, dairy, hospital, and town in general. Among the many items of equipment are included a Precision Scientific Co. water still, a pressure-steam sterilizer, and a Thelco incubator. Bacteriological tests, analyses of samples, and development of new products for use in the various processes are carried on here. Recently a new process has been developed, in the research section, which renders cotton cloth flameproof. Cloth which is so treated is sold under the registered trade name "Pyronized." The glove factory has taken advantage of this and is making gloves from this material, which have been well accepted by the trade.

Air conditioning in the chemical laboratory, and office, is principally for comfort. Accuracy of control is not so important. The system heats, cools, humidifies, or dehumidifies the air being circulated and automatically adjusts the atmosphere to conform to settings made on a control panel. A constant intake of fresh air is made in order to maintain a healthy atmosphere. Wall-type Anemostats are used as diffusers. This system was installed by Randall Bros., Atlanta, Ga., using Westinghouse equipment.



Parks-Cramer standard laboratory air-conditioning unit; note control switches and refrigeration unit

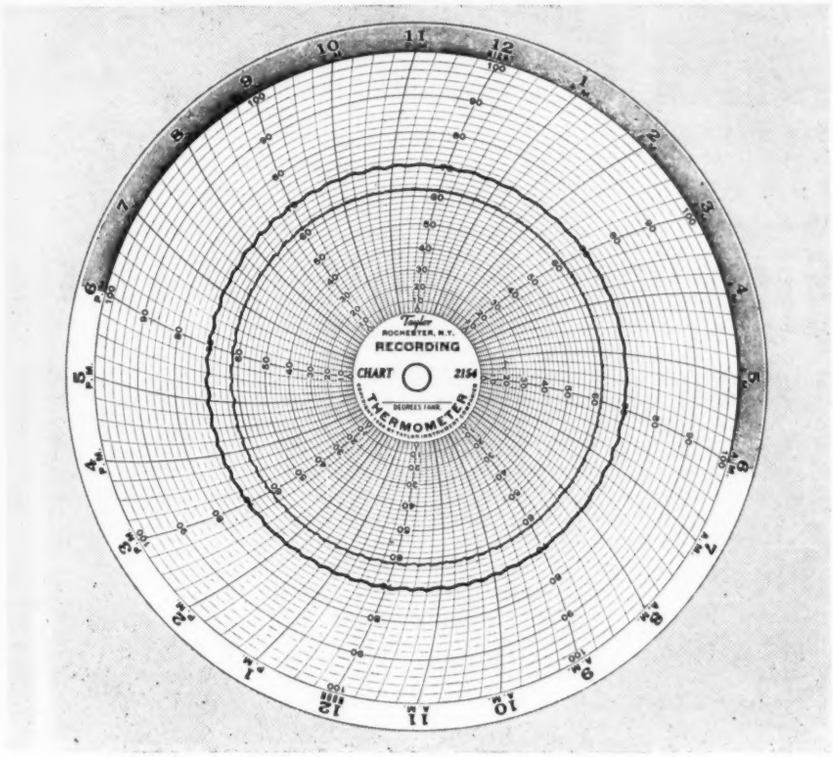


Chart showing record of 24-hour run: outer circle shows dry-bulb reading; inner circle, wet bulb reading

In order to study and improve manufacturing conditions and processes, an Eastman Kodak Co. motion picture camera and projector are provided. This gives detail studies that can be analyzed and enables corrections to be suggested.

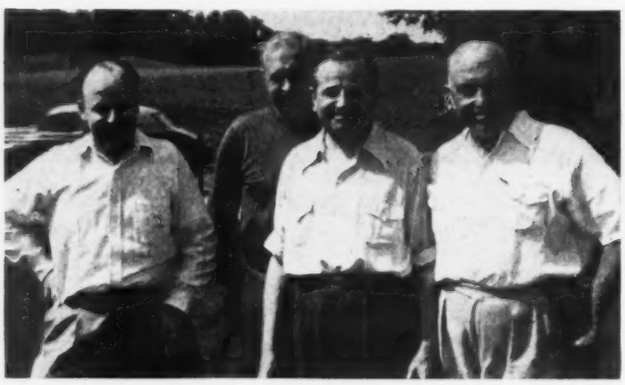
Lighting equipment was installed by the Mid-South Supply Co., Chattanooga, Tenn. Lighting in the physical testing laboratory is entirely of the fluorescent type, using four units, each having four 40-watt fluorescent tubes. This arrangement produces approximately 40 foot-candle intensity on the working plane. The chemical laboratory and office are lighted by ceiling-type indirect lighting fixtures.

Walls and ceiling of the laboratory are insulated with 6 in. of rock wool to assist in keeping the surfaces at room temperature and permit close and accurate control of the atmospheric conditions through the entire 24 hours a day.

Chicago Yarn Men Entertain Mid-West Knitters

OVER 100 MEMBERS and guests visited the Barrington Hills Country Club, Barrington, Ill., on June 18 for the annual outing of the Chicago Yarn Men's Club. Golf was the order of the day and several foursomes are shown.

R. J. Frost, Phoenix Hosiery Co. (winner of low gross); R. P. Cavanagh, Kenosha Full-Fashioned Hosiery Mills; W. J. Yates, Johnston Mills, president of Chicago Yarn Men's Club; J. Kahn, Kahn & Feldman, Inc.



W. W. Stegeman, Wilson Bros.; Ernest L. Olrich, Munsingwear Corp. (winner of low net); Frank M. Folsom, Goldblatt Bros.; Fred W. Frank, Dixie Mercerizing Co.

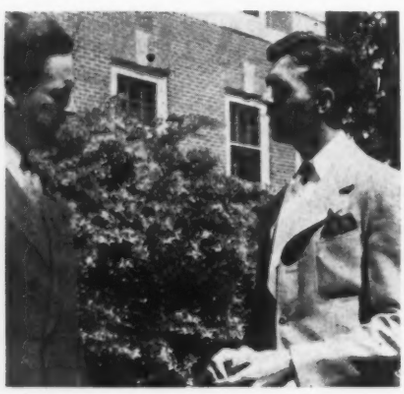
J. H. Brine, Oscar Heineman Corp.; J. A. Holt, Aberfoyle Mfg. Co.; Earl Constantine, National Association of Hosiery Manufacturers; D. C. Woods, Rollins Hosiery Mills.

Geo. F. Dickson, Minneapolis Knitting Works; J. B. Frierson, Dixie Mercerizing Co.; R. S. Firestone, Firestone Rubber & Latex Products Co.; R. Y. Cooper, Cooper's, Inc.

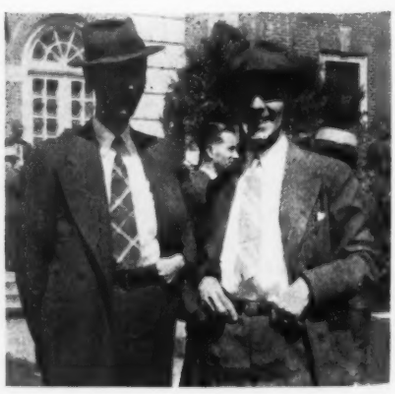
H. A. Dales, Hand Knit Hosiery Co.; F. W. Boehmen, BZB Knitting Co.; H. W. Nolde, Nolde & Horst Co.; C. F. Peffer, Cannon Mills, Inc.

Alabama Textile Operating Executives at Auburn

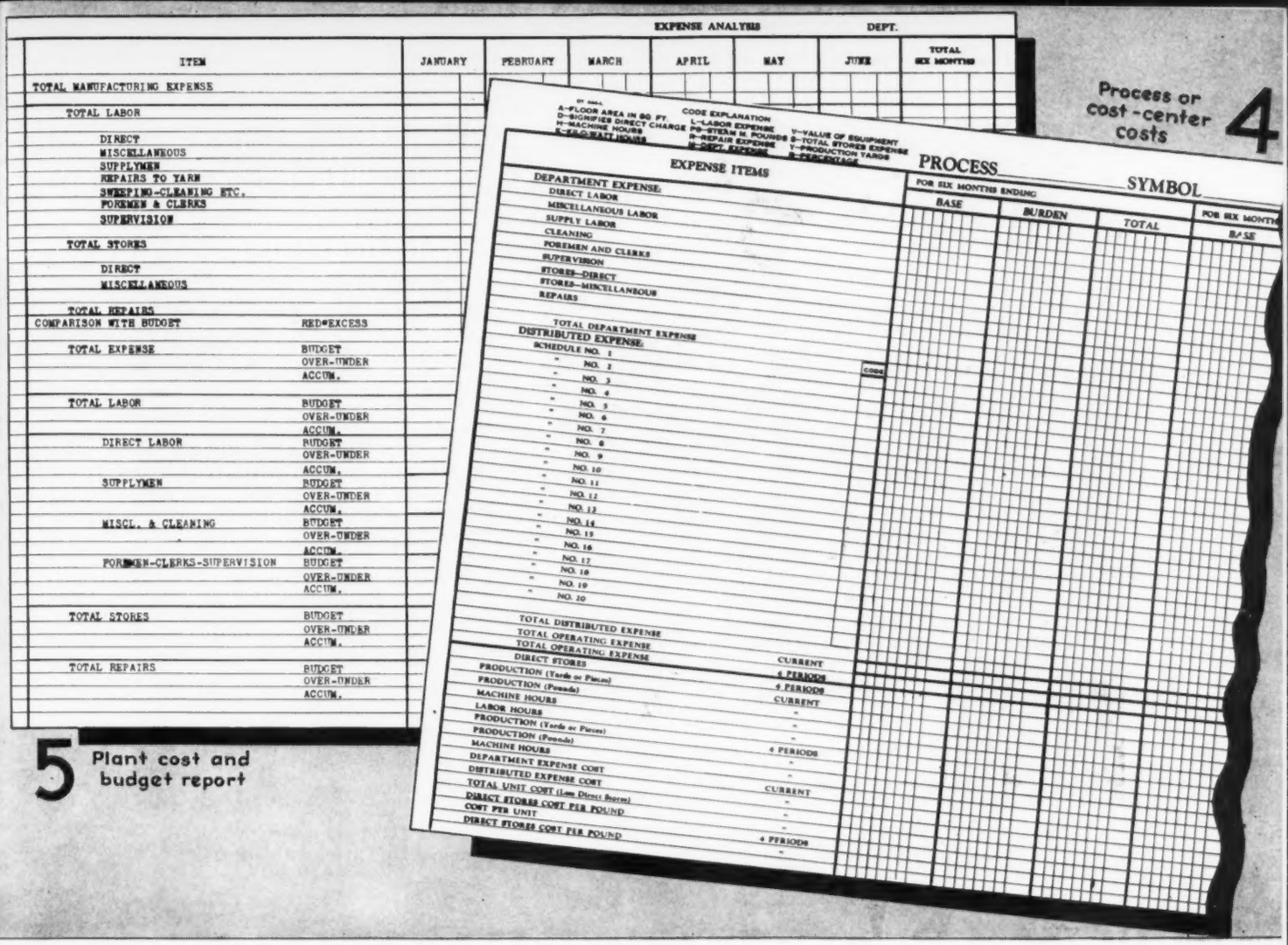
Frank K. Petrea, general chairman, ATOE, welcomes Erwin Lehmann, vice-general chairman, at Auburn meeting (see page 97)



Clark Erwin, of Reeves Pulley Co., discusses the program with Ben Crawford, secretary-treasurer, ATOE



Emmett Warren, Avondale Mills, who led discussion on weaving, and Pierce Robert, Atlanta Textile Machinery Co.



Cost Manual for Yarn Processing

Compilation of unit costs; allocation of expenses to process and cost centers

By FORREST J. FALES

Cost Engineer, Glenlyon Print Works

VII. Process or cost-center costs. At the end of each six-months' period, as recommended in Section VI, unit costs should be compiled in the following manner for each process or cost center. (A suitable accounting form is shown in Fig. 4, and a plant cost and budget form is shown in Fig. 5.)

From the monthly records as described in Section VI it will be found that charges for direct labor, direct stores, and repairs may be apportioned against each process or cost center.

Copyright 1941, Forrest J. Fales. All rights reserved.

THE FIRST AND SECOND installments of this short series of articles—which began in the May issue—dealt with the setting up of process and cost centers and with methods of compiling charges. The next installment will continue the discussion of allocation of expenses.

★ ★ ★

These items will form the basis for practically all subsequent distribution of expense. Distributions and the basis for the same will be taken up in the order given in Table III, and it will be noted that all such items falling into the base expense division, with the exception of "Claims paid" and "Freight and expressage paid," will be allocations of expense within each operating department.

Indirect or unclassified labor (which should be a very small item) for each department is allocated to the processes or cost centers on the basis of the direct labor charge.

Supply labor for each department is allocated directly to each process or cost center served or on the basis of pounds of yarn handled.

Sweeping, scrubbing, and cleaning expense for each department is allocated on the basis of square feet of floor area utilized by each process or cost center.

Repair work on yarn within the department is allocated to each process or cost center responsible or on the basis of pounds of yarn handled.

(*Continued on page* 69)

High-speed stitching machines equipped with individual lamps, posture chairs fitted to each girl, and ample work areas have contributed to the high efficiency of this stitching room

10 Ways to Speed Up Stitching

Among factors are careful selection of operatives and use of modern machines

By ALFRED H. WESSLEN
Industrial Engineer, Ware Knitters, Inc.

HOW TO OBTAIN MAXIMUM PRODUCTION in the stitching room is a problem with which practically every knit goods manufacturer is confronted today. There are at least ten factors which affect production and which must be taken into consideration if the problem is to be solved satisfactorily. These factors are: (1) operatives, (2) seating facilities, (3) work area, (4) lighting, (5) atmospheric conditions, (6) power transmission, (7) thread quality, (8) supply of work, (9) condition of machines, and (10) machine speeds. No attempt has been made to list these factors in the order of their importance.

Formerly, when operatives in the stitching room ordinarily were on straight piece work, there were many misfits working day after day on jobs for which they had no natural aptitude. Now with minimum wage laws, the least efficient operatives probably have already been replaced in most plants. Time studies show, however, that two operatives with about the same average earnings may exhibit a distinct difference in speed of performing certain elements of the job. For instance, one of two stitching or seaming operatives was found to have a special knack for inserting the sleeves, whereas the other disliked that particular part but made up time on remaining operations. When this stitching operation was broken down into two jobs, and each operative was allotted the job at which she was adept, production was improved and earnings of both operators were increased.

The importance of proper seating facilities as a factor affecting production is becoming more widely recognized. But even today a visit to some stitching rooms will show the worst conglomeration of chairs imaginable. Some chairs will have empty thread cones under the legs to build up height; some will have as much as 6 in. of padding on the seats; some will have the legs cut short, with apparently no attention paid to the backs. In contrast, many of the more progressive companies provide posture chairs which are individually adjusted to insure correct and comfortable posture for each girl.

The work area includes space on stitching table, aisles, and storage facilities. It is essential that the sewing machines be spaced properly, thus permitting the garments to be so laid out that they can be handled most easily and without interfering with next operative. Aisles should be wide enough to permit passage without interrupting the work of any of the girls at the tables. There

should be convenient and ample storage space so that an operative can dispose of completed lot and select the next lot quickly.

Lighting is receiving more and more attention, and the next few years should bring improvements in stitching room lighting comparable to those made recently in other departments of textile mills. There is no doubt as to the importance of eye strain in relation to production. This is recognized by the sewing machine manufacturers, and some of these companies are now making and manufacturing lamps which they recommend for individual lighting of their machines.

ATMOSPHERIC CONDITIONS have as yet received little attention as the general run of stitching rooms are concerned. Usually conditions are worse during winter months than in the summer months. In the winter the windows usually are closed; as a rule, the air is dead and the room is too warm. In the summer windows are open and there is some fresh air circulating. On sultry summer days, however, the confining nature of a sewing job becomes almost unbearable. Modern air conditioning undoubtedly would improve morale and increase production.

Consideration of power transmission starts with the motor. An overloaded motor causes speed fluctuation and shutdowns due to overheating. Next, the size of the pulley may be incorrect. This is likely to happen when machines are shifted and pulleys are not changed to correspond. The transmitter can be a great handicap to the operative if it is not properly adjusted to permit quick starting. Poor brakes may also cause trouble. Low-quality belting can be a distinct handicap to the sewing machine operative if it breaks frequently or stretches and causes slippage and loss of speed. Machines should be checked frequently with a tachometer.

Thread of inferior quality or of the wrong type for a job can cause a sewing machine operative immeasurable trouble and considerable loss of production. It is good practice to ask operatives to tally thread breaks for a day. They are usually glad to coperate in such an investigation. Breakage far beyond the expectation of the management is often revealed.

The importance of having a steady supply of work is generally recognized. However, the supply can easily be interrupted without its being noted by the supervisors and without causing any complaint from the operatives. To insure maximum production, there should be ample work ahead of each operation so that it can be segregated as to color. Frequent thread changes cause loss of production. The sewing machine operatives should have a definite place from which to obtain their work and a definite place to dispose of completed work. It is quite easy for operations to get out of balance and it may be some time before it becomes apparent that there is slight delay between two operations. The operatives themselves ordinarily do not realize the loss to them caused by brief, but frequent, delays.

Machine breakdowns quite obviously mean loss of production. If a machine is continually being serviced by the machine fixer, it is false economy to continue to fix. Such a machine should definitely be replaced. To try to speed up an old sewing machine to correspond to the newer types is foolish and is almost certain to lead to trouble.

SPEED OF SEWING MACHINES is an important factor. With the latest models of machines production increases of from 10 to 40% may be realized. This increase in production is due in part to higher machine speeds and in part to other factors. If the machine time of a sewing operation is 50% of the total time, a 25% increase in machine speed will result in about 11% increase in production; if machine time is 75% of total time, a 25% increase in machine speed will result in about 17½% increase in production. In addition, when new machines are installed, the sewing machinery manufacturers usually recommend improvements in lighting, arrangement of work areas, etc., which will result in further production increases.

Note in the accompanying photograph the latest model high-speed Merrow stitching machines equipped with individual lamps, and mounted on an American Safety Table Co. table; each girl wears uniforms provided by the company and is seated in a DoMore posture chair which has been fitted to her and which has her name on a label on the back rest. Careful attention to the ten factors discussed above will enable other mills to increase production of their stitching department to the high level which prevails in the one illustrated.

Cost Manual For Yarn Processing

(*Continued from page 67*)

Miscellaneous stores expense for each department is allocated to processes or cost centers on the basis of direct labor charged.

Claims paid and freight and expressage paid expense will be handled through schedules of distributions as will be explained later.

Foremen, clerks, and general supervision expense for each department is allocated to processes or cost centers on the basis of direct labor charged. These items would ordinarily originate in a special pay-roll account in the main books, but would pass through the monthly plant or cost records for the credits to such accounts.

At this point it will be observed that all direct charges and distributed items of manufacturing expense have been made, and with the exception of foremen and clerks and general supervision all such charges have originated with time cards and stores-issue cards.

All other items of expense as enumerated below, with the exception of interest on investment, originate in the main books of account and are best distributed through schedules of expense compiled by bases upon which distributions are made.

Administrative expense is first broken down in the divisions shown in Table IV. This is only an illustrative list, indicating the method of classification best suited to the different distribution bases.

It is recommended that the so-called fixed charges be figured at approximately the following rates per annum: interest on investment, 5%; interest on stores inventory, 5%; depreciation on buildings, 3½%; and depreciation on equipment, 5%. Unless interest is carried in the main books, it will be necessary to compile this expense in the plant or cost records.

TABLE IV.

Breakdown of administrative expense

Administrative Part 1
- General expense
- State tax
- Selling expense
- Traveling expense
- Advertising
- Officers' salaries

Administrative Part 2
- Employees' insurance
- Workmen's compensation
- Civic expenses or welfare

Administrative Part 3
- Stores price adjustment
- Loss and breakage in stores
- Stores inventory adjustment

Administrative Part 4
- Plant replacement charged to operating

Employees Run Safety Campaign

Fresh approach toward solution of the accident problem at Firth Carpet Co.

By L. A. BENOIT
Personnel Director, Firth Carpet Co.

A SAFETY CAMPAIGN is conducted in the Firth Carpet Co. plant, Firthcliffe, N. Y., during the last three months of every year. Naturally, over a period of years the employees have become more safety minded. Just before the latest campaign was started some of the workers asked if they couldn't conduct the campaign themselves. This was considered, and finally it was decided to place the campaign in the hands of the employees. It was further decided that each department would run its own individual campaign along lines which the people working in that department determined upon. The results have been so satisfactory that the same sort of a campaign will be conducted this year and will be placed entirely in the hands of the employees.

A prominent feature of the campaign was the development by the employees of new safety slogans, cartoons illustrating the workers' own viewpoints as to the cause and prevention of accidents, exhibits showing safe and unsafe tools, and score boards for keeping run of the progress made by the various departments during the contest. Nearly a hundred slogans, cartoons, and other exhibits were prepared by the workers themselves. A few of these are shown in the accompanying illustrations to depict what can be done when the employees really become interested in the accident problem.

Another unusual development is the method for placing responsibility for accidents which have occurred in the plant. Quarterly meetings are held, at which time accidents which have occurred during the previous three-months' period are reviewed. A sort of a trial set-up is used. A clerk reads the reports from the plant hospital, the doctor, the employee, the safety engineer, and the foreman concerning a certain accident. The personnel manager then defends the employee, not only with the facts which he has at hand, but with every possible excuse or alibi that an employee would use in order to place the responsibility for the accident elsewhere other than upon his own shoulders. The foreman then defends himself, pointing out the safety instructions which he had given the employee, the guards which perhaps had been misplaced, or the inattention on the part of the employee. The safety engineer then defends the company from the viewpoint of lack of proper guards, defective machinery, etc. All the employees at the meeting are then afforded an opportunity to ask questions pertaining to the defense which each party has offered. When there are no more questions, a ballot is taken in secret in writing by code; such as, *A*, responsibility of employee; *B*, responsibility of other persons; *C*, responsibility of management; and *D*, hazards of industry. In cases when there is a combination of responsibility, *AD*, *AB*, or any other combination can be used. These ballots do not have to be signed and, therefore, the result of the ballots is very fair.

Below and on opposite page are a few safety cartoons submitted by the workers

PROTECT YOUR EYES
DANGER
GRIND DOWN BEFORE USING
GRIND DOWN WHILE USING
WEAR GOGGLES
BE SAFE
DON'T USE THIS KIND OF ROPE
DISCARD OR JUNK ALL CUT OR WORN ROPE
WEAR GLOVES WHEN USING ROPE
THIS PLANT is a CONTESTANT in the ANNUAL STATE-WIDE ACCIDENT PREVENTION CAMPAIGN OF ASSOCIATED INDUSTRIES
SEPT. 29th to DEC. 31st
Let's have a perfect record
Be Safety Minded
Watch your departmental record from day to day.
WEEKS
Cut Order
Shipping
Stitching, Maintenance
100% MEANS PERFECT RECORD FOR WEEK
Let's be Safety Conscious
Eliminate these forms of Carelessness
GUARDS ARE BUILT FOR YOUR PROTECTION
See that they are in proper place
Never run without them to be a
- Safe Worker -
SAFETY-HINTS
EXCUSE ME, B-But IT WASN'T MY FAULT.
OUCH !!! WATCH WHAT YOU'RE DOING
BUMPS ARE MAJOR CAUSES OF ACCIDENTS IN THIS DEPT.
BE A SAFE WORKER.
RIGHT METHOD
USE LADDER
WRONG METHOD
SAVE SELF FROM STRAIN AND POSSIBLE INJURY.
SAFETY-HINTS
MOST CUTS ARE CAUSED BY GETTING FINGERS TOO CLOSE TO THE CUTTING EDGE.
KEEP FINGERS AWAY FROM CUTTING EDGE OF SHEARS.
BE A SAFE WORK

The most wonderfull maehine in this plant is the

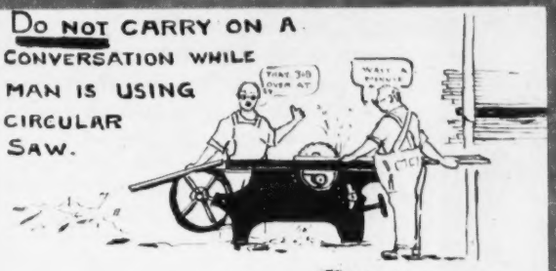
HUMAN BODY

take eare of it

Let us keep our dept. out of the

DOG HOUSE

DO NOT CARRY ON A CONVERSATION WHILE MAN IS USING CIRCULAR SAW.



Safety Always

WHY GAMBLE

Why take chances with your life and the lives of others. Play safe and avoid any accident by being aware of the safety of yourself and your co-workers.

"THINK FIRST-BEFORE ACTING"

ATTENTION!

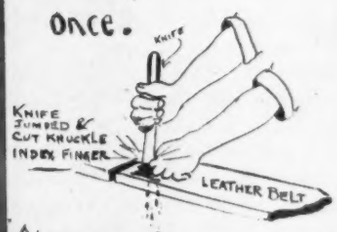
Preventing injury to others helps prevent injury to yourself.

Speed throwing is unnecessary. Walk over to truck to avoid (hitting) a miss.

"SAFE MAN"

SAFETY FIRST

This happened in Storeroom once.



ALWAYS USE A SQUARE THUS:-

The plant

HOSPITAL

is for your benefit-
Have cuts & bruises properly treated at the Hospital at onee
The best safeguard against

INFECTION

DONT LET CARELESSNESS MAR YOUR HAPPINESS. REMEMBER YOU HAVE ONLY ONE PAIR OF EYES AND THAT'S ALL

SAFE TOOLS ADD TO YOUR SAFETY
IF YOU KNOW WHERE ANY OF THESE CONDITIONS EXIST REPORT THEM TO YOUR FOREMAN AT ONCE
FILES WITHOUT HANDLES
BOARDS WITH PROTRUDING NAILS
ROPES WITH STRANDS BROKEN
SHEARS WITH WORN OUT
TRUCKS WITH WHEELS BROKEN OR MISSING
LEAKY OIL CANS
CHISELS WITH MUSHROOMED
HAMMERS WITH LOOSE OR BROKEN HANDLES
WORN OR BROKEN WIRE CABLES
METAL BROKEN ON SPOOL
REMEMBER THIS BROKEN LADDER

GOOD HOUSEKEEPING

you know who I am why not use me and keep the room

CLEAN & SAFE

Continuous Peroxide Bleach

Renfrew Bleachery installs new method to speed up processing of cotton fabrics

A trial installation of a continuous process and equipment for bleaching cotton piece goods developed by the R&H Chemicals Dept. of E. I. du Pont de Nemours & Co., Inc., was described in the June, 1939, issue of TEXTILE WORLD. Experience gained through plant experiments carried out with that installation has resulted in several important modifications and improvements in the process. An installation of the process made recently by Renfrew Bleachery is described below.

BLEACHING OF COTTON FABRICS has been speeded up and costs have been reduced at Renfrew Bleachery, Travelers Rest, S. C., by installation of a new continuous peroxide bleaching process developed by the R&H Chemicals Dept. of E. I. du Pont de Nemours & Co., Inc. The process as carried out at Renfrew is the result of about four years of experimental work, during which trials were first carried out in various plants with portable semi-continuous equipment and then with a completely continuous unit. With the new process, the goods—after being singed, soured, and washed—are processed continuously at a speed of 100 yd. per min. Total time required for bleaching—from gray bins to white bins—is 2 hr. 10 min. This is only a fraction of the time required for bleaching the same goods by the regular kier boil and kier bleach process.

Major steps in the peroxide-process include passing the goods through (*A*) a caustic saturator, (*B*) first heater tube and J-box, (*C*) cold-water washer, (*D*) squeeze rolls, (*E*) a 300-gal. peroxide saturator, (*F*) second heater tube and J-box, and (*G*) final cold-water washer. After the goods have been singed, soured, and washed in the usual manner, they are opened by means of a scutcher and entered open-width into the caustic saturator, which is a cast-iron vat with a capacity of 350 gal. Caustic solution averages about 2½% on the weight of goods, but is varied according to requirements. The goods absorb about 1 lb. of this solution for every 1 lb. of cloth. Next the goods are converted back to rope form and immediately entered into the first heater tube and J-box unit. This unit, which is the heart of the process, is constructed of stainless steel and is insulated on the outside to minimize loss of heat. The tube is filled with live steam flowing counter to the direction of the cloth. The goods pass through the heater tube into the J-box, where they remain for 1 hr. at a temperature of 205 to 210° F. retained from the steam treatment. The 1-hr. treatment in this unit is said to be equivalent to a lengthy kier boil.

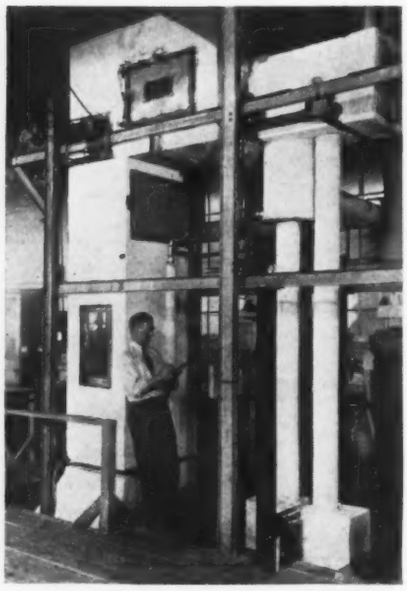


Photo by Coze

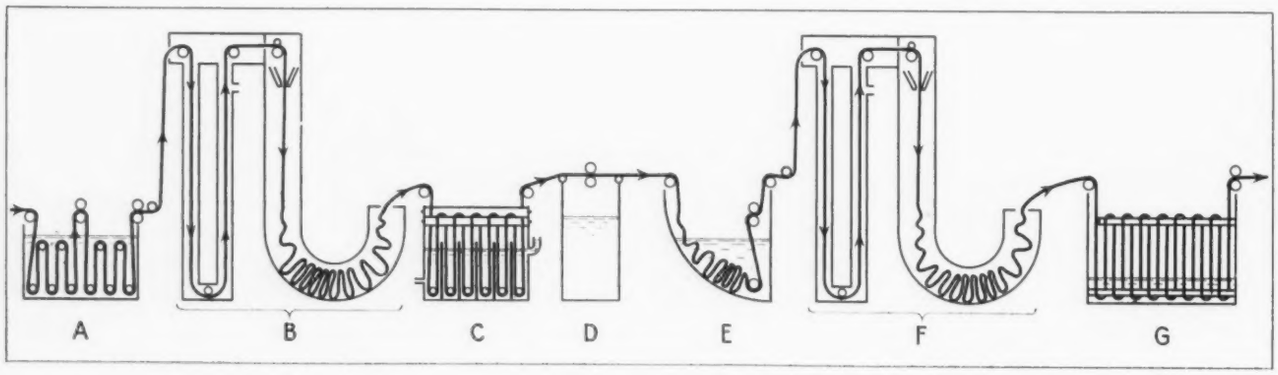
Heater tube and J-box unit is heart of the process

Following the caustic and steam treatment, the goods are pulled into a six-strand slack washer where they remain about 8 sec. in each of several compartments. Squeeze rolls remove excess moisture after the caustic is washed out.

The peroxide saturator, next in line, is so designed that cloth remains submerged for a predetermined length of time in a solution of hydrogen peroxide and sodium silicate maintained at a strength of 0.75 volume. This solution is for light-weight goods, the strength varying with the type of fabric. The goods take up their own weight of peroxide solution. Liquid level in the tank is kept constant.

The peroxide-saturated goods are then passed into a second heater and storage box similar to the first unit. In the heater tube the cloth is treated with a steam-air mixture under con-

(*Continued on page* 97)



Diagrammatic sketch of continuous peroxide bleaching range at Renfrew Bleachery: A, caustic saturator; B, J-box unit; C, cold-water washer; D, squeeze rolls; E, peroxide-bath; F, J-box unit; G, cold-water washer.

Power for a Small Mill

Hudson Cotton Mfg. Co. effects saving of $4,000 a year by diesel installation

By WILLIAM H. GOTTLIEB

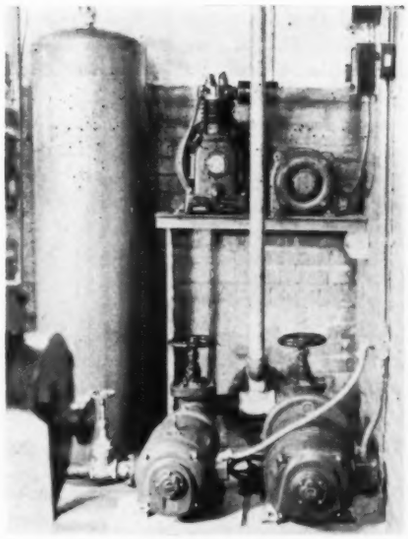
DIESEL POWER POSSIBILITIES in small mills are illustrated by the experience of Hudson Cotton Mfg. Co., Lenoir, N. C. This company installed its first diesel in 1937, and last year put in a second unit. Records show that as a result of these installations the mill is saving well over $4,000 a year on power costs.

Hudson is a 6,000-spindle cotton mill manufacturing carded peeler yarns put up on skeins, warps, cones, and tubes. Productive equipment includes a single-process Kitson picker, 17 Whitin and 13 Saco-Pette cards, 24 deliveries of drawing, 1 76-spindle slubber, 2 120-spindle intermediates, 4 156-spindle speeders, 24 250-spindle Whitin long-draft spinning frames, 16 240-spindle Whitin twisters, and 2 100-spindle model 30 Foster winders. The mill normally operates 24 hr. a day for five days a week, and the load averages around 315 to 320 kw. All equipment in the mill is driven by motors with a combined capacity of 450 hp. In addition, there is a lighting load equivalent to 25 hp.

The first Diesel—a six-cylinder, Model O Buckeye, developing 450 hp. at 360 r.p.m.—drives directly a 300-kw. alternator with belted exciter. For long periods the power plant ran overloaded, which, for steady operation, is an unhealthy procedure. Then, in July, 1940, the company installed a 190-hp., four-cylinder, Buckeye Model 70 diesel, operating at 514 r.p.m. This unit is directly connected to a "package" generator, which means that the belted exciter and a small switchboard panel are mounted compactly on the housing of the 125-kw. alternator.

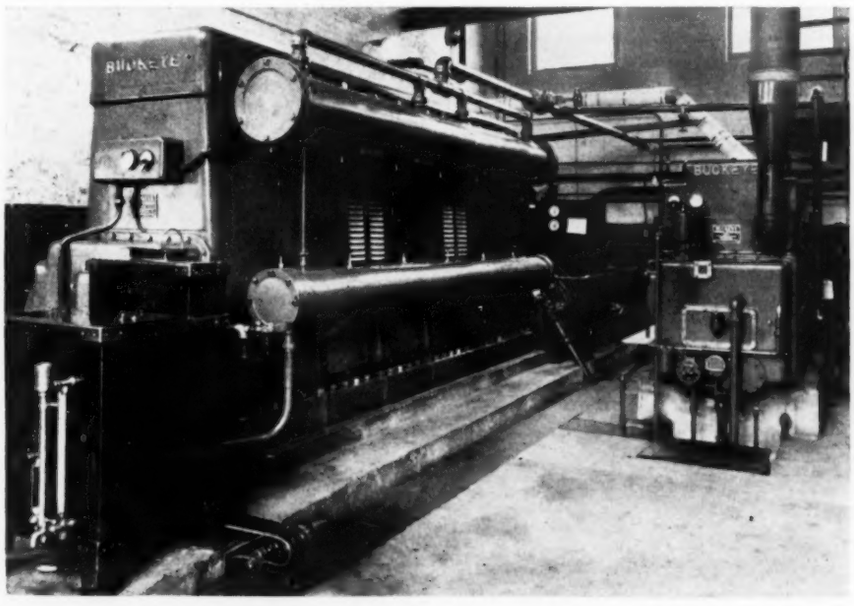
The new engine removed the overload from the older diesel, with resultant improvement of performance. The accompanying table gives figures on kwh., production, and fuel consumption for the year ending Sept. 30, 1940. Average for the year was a production of 12 kwh. per gal. of fuel, and it is expected that the comparable figure for this year will be closer to 14 kwh.

For the year 1939, the total cost of fuel, lubricating oil, and repairs for the diesel plant was 6.03 mills per kwh. No additional workmen were hired to care for the diesels and, therefore, the company does not assess the power plant with any labor cost. The regular mill mechanic looks in on the engine room periodically and handles the simple maintenance. Each engine is equipped with a device known as a "silent watchman," which automatically shuts down the engine if lubricating-oil pressure or cooling-water pressure drops too low.



Cooling water pumps, starting air compressor, and other auxiliaries are compactly arranged in one corner of the engine room

THE ENGINE ROOM is almost outdoors. Three walls and the roof are solid enough, but the fourth wall is open, with only an iron grill to keep out intruders. Fuel oil is stored in an 18,000-gal. tank above ground outside the plant. From this source it flows by gravity to two 500-gal. day tanks underground just outside the engine room. A built-in pump on each engine draws



Two Buckeye diesels furnish all power required at Hudson Cotton Mfg. Co.

Relation Between Power Produced and Fuel Consumed

	Kwh. produced	Gal. fuel consumed	Kwh. per gal. fuel
Oct. '39	140,600	9,872	14.2
Nov.	173,500	15,346	11.3
Dec.	126,200	11,022	11.5
Jan. '40	150,200	11,694	13.7
Feb.	130,400	5,075	11.2
March	56,700	5,075	11.2
April	125,400	11,811	10.6
May	64,000	5,090	12.6
June	76,000	6,060	12.5
July	*107,800	*14,323	*7.5
Aug.	134,300	10,295	13.0
Sept.	168,900	12,204	13.8
Total	1,464,000	122,311	12.0

* In this month the amount of fuel consumed by the new engine was included in the totals, but the engine's output was not recorded; consequently, the kwh. per gal. shown in this table for July is deceptively low.

fuel oil through a disk-type filter to an auxiliary tank on the governor end of the engine. The fuel then enters a header extending the length of the engine and flows through branch lines to an individual injection pump for each cylinder. The operator fills the day tanks every 12 hr. and gages fuel consumption for the past period.

Lubricating oil, S.A.E. 30 to 40, is delivered under pressure to bearings and cylinders by an engine-driven pump. In the case of the larger diesel, oil is taken from the sump below floor level by a small motor-driven gear pump, filtered through flannel bags, and returned to the sump. Despite this treatment, the management deems it wise to drain the crank-case and change oil every 1,000 hr. of operation. In consequence, it was decided not to put filters on the smaller engine.

The cooling-water system is of the open type. Two motor-driven centrifugal pumps—one delivering 100 gal. per min.; the other, 180 gal. per min.—circulate the water through the engine jackets to a spray pond of 120,000-gal. capacity. A 2-in. pipe is arranged to return hot water to the pumps, bypassing the pond. Thus, a simple valve adjustment permits the operator to control the temperature of the jacket water.

Exhaust gases pass from the header into a buried drum, then up through a stand-pipe. There are no near neighbors, and the silencing action of this arrangement is deemed sufficient. As a matter of fact, with the mill in operation, there is no engine noise apparent even in the work rooms. Both engines are started with compressed air, which is supplied by a motor-driven compressor.

The plant is largely automatic in operation and well equipped with instruments to assist the operator. Thermometers, pressure gages, and pyrometers permit him to check on engine conditions rapidly when he visits the engine room.

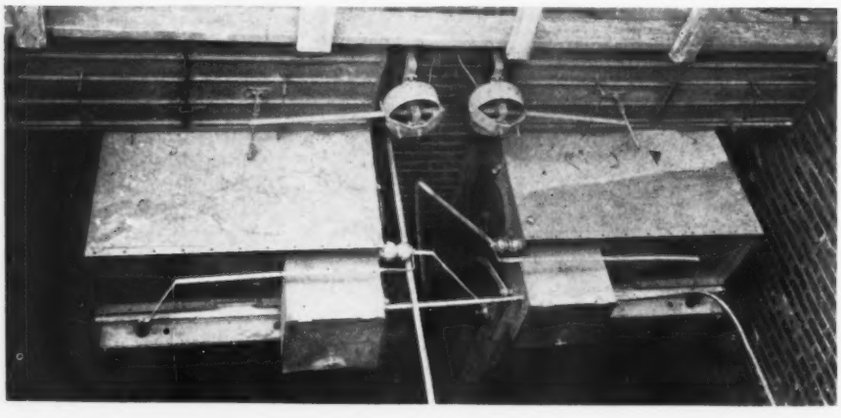
A fuel meter and a watt-hour meter allow the management to make precise calculations of engine output and efficiency. An automatic synchronizer parallels the two engines without attention from the operator.

Good accounting procedure calls for amortization of the entire cost of the two-engine power plant over a period of 20 years. At the current level of production, this means an allocation of slightly more than 1 mill per kwh. to capital investment, bringing the total power cost for 1939 to a little more than 7 mills per kwh. If the entire cost differential is applied against the cost of the equipment, the plant will pay for itself in less than six years.

Air-Conditioning at Davenport

TO ASSIST in the knitting of Nylon full-fashioned hosiery, Davenport Hosiery Mills, Chattanooga, Tenn., has recently installed a special air-conditioning system in its Eleventh St. plant. As a result, quality has been improved and number of seconds has been greatly reduced. A feature of the installation is the use of two Electro-Matic self-cleaning air filters manufactured by American Air Filter Co. These filters are the first of six which will be employed for filtering air for the first three floors of the mill. The six filters will be installed in a special 20 x 33-ft. room now under construction. The fourth floor will have a separate system of its own, with three more cleaning units located in a new 14 x 33-ft. room. The two filters shown in the illustration are temporarily located in what will be the air intake for the room under construction.

Dust-laden air entering the Electro-Matic filter first passes through an ionizer in which the dust particles receive a positive electrical charge. The particles then pass on to a flexible filter curtain consisting of a series of electrically charged metal plates mounted on two endless chains which rotate over top and bottom sprockets. The positively charged dust particles are attracted to the grounded plates and are precipitated or impinged on them, where they are held by a film of oil. At the bottom of the filter is an oil reservoir. When the filter plates enter the oil bath, the dust particles settle to the bottom of the reservoir as sludge, and the plates take on a new film of oil. The curtain moves ¾ in. during a period of 8 sec. at 12-min. intervals. After passing through this curtain (the front curtain), the air passes through a second curtain (rear curtain) of similar construction. Use of two curtains doubles the collector plate area and permits higher air velocities than would be feasible with a single curtain.



Electro-Matic self-cleaning air filters installed at Davenport Hosiery Mills

Present arrangement for air-conditioning the first three floors, which will be amplified somewhat in the future, is for the electrostatically filtered air first to pass through a 900-nozzle Parks-Cramer air washer. Next the air is cooled to 43° F. by means of Carrier cooling coils and then suddenly wormed in order to precipitate excessive moisture. The dehumidified and cooled air finally is distributed by means of Parks-Cramer ducts throughout the room. The arrangement described makes it possible to maintain room temperature at 80° F. and relative humidity at 48%, desirable conditions for knitting Nylon.

An interesting phase of the air-conditioning program was installation of several hundred new Westinghouse fluorescent lighting units, which will not only improve lighting conditions, but also will help keep the room cool because of the small amount of heat radiated.

The fourth floor of the plant will be air conditioned with Carrier equipment throughout except for the Electro-Matic air filters.

Outing of Northern New England, A.A.T.C.C.

Kenneth Barnard (right), Pacific Mills, chairman of technical program committee for next annual meeting; Francis Casey (Sandoz), at left

The outing committee—(2nd from left) George Stewart (Sandoz), chairman of dinner committee; (center) George Linberg (Du Pont), golf committee; (2nd from right) A. E. Sampson (Calco), general chairman

Dr. H. C. Chapin, secretary of the national organization, uses his camera at the outing which was held June 6 at the Vesper Country Club, Lowell, Mass.

N. Y. Club of Phila. Textile School

New York Club of Philadelphia Textile School closed its activities for the season with a banquet held June 12. Above, Milton Schmidt, right, Normington & Schmidt, retiring president of the group, shakes hands with Howard P. Galloway, TEXTILE WORLD, incoming president. Speakers were H. H. Schell, Sidney Blumenthal & Co., and Bradley C. Algeo, Philadelphia Textile School

Outing N. Y. Section, A.A.T.C.C.

Max B. Kaesche (Sandoz), chairman of outing committee

J. S. Lange (Geigy) does some horse-shoe pitching; E. H. Schmidt (Borne Scrymser) treasurer of the section at left

Outing of Philadelphia School Alumni Assn.

On the veranda at Manufacturers' Country Club, Bradley C. Algeo, left, assistant dean, Philadelphia Textile School, sits one out with Ted Heyward, Swift & Co.

"Where did you get that hat?" someone asks Ben Archer, left, General Dyestuff Corp., as L. A. Sandler looks on

Army Gets Many Textile Graduates

Largest classes in history get diplomas; many cannot enter industry this year

THE TEXTILE SCHOOLS of the United States turned out more graduates this year than ever before, but, unfortunately for the industry, it is likely that fewer will go into the mills because of the large number expected to enter military service. This is particularly true of the southern schools where many of the students participated in R.O.T.C. training and will be required to spend at least one year on active duty following graduation. Furthermore, it is possible that quite a few of the graduates will enter defense industries rather than the textile industries because of the attractive financial offers some firms are making college graduates. A number of schools reported that more firms offered employment to graduates than graduates were available.

Alabama Polytechnic Institute, Auburn, Ala. Graduated eight students in Department of Textile Engineering. All had offers to enter industry but four went into military service as reserves on active duty owing to their undergraduate training.

Bradford-Durfee Textile School, Fall River, Mass. Graduated 25 day and 37 night diploma students. In addition, many certificates were awarded for special textile work, and 273 students during the year were trained in machine-shop technique in order to go into defense jobs.

Clemson Textile School, Clemson, S. C. Graduated 72 students with degrees in textiles, the largest class in history. A large part of the class is expected to go directly into the Army for a year's service as reserve officers. Norris Medal for highest all-round four-year record was awarded to DeWitt Javan Ross, of West Columbia, S. C., who in addition to winning high scholastic honors, also was cadet colonel in command of over 2,000 R.O.T.C. trainees. Textile Colorist medal was awarded to Wade H. Carter.

Georgia School of Technology, Atlanta, Ga. Graduated 24 textile students. Several students expected to enter military service. NACM medal awarded to David Downing Hamilton. Cotton Manufacturers Association of Georgia medal went to Madison Filmore Cole.

DeWitt Javan Ross, Clemson, winner of Norris Medal

Lowell Textile School, Lowell, Mass. Graduated 70 students. Arthur Besse, president of National Association of Wool Manufacturers, delivered commencement address. Tribute was paid to Prof. Edgar Harrison Barker whose retirement was announced (Details on page 122). NACM medal was awarded to Leo Linden.

New Bedford Textile School, New Bedford, Mass. Awarded diplomas to 40 day and 140 evening class graduates, and practically all have secured places in industry. Arthur W. Forbes, general manager, J. C. Rhodes Co., was principal speaker. NACM medal awarded to Isaac Steiner.

N. C. State College, Raleigh, N. C. Graduated over half a hundred students with textile degrees. Large number of students expected to enter military service. NACM medal awarded to Paul Dudley Kaley, of Scranton, Pa., who, in addition to making an outstanding scholastic record, also served as editor of the college annual.

Philadelphia Textile School, Philadelphia, Pa. Graduated 58 students and awarded certificates to many day and evening students. NACM medal went to Arthur Israel. Graduating class presented Dean M. Earl Heard with a Scott tester suitably inscribed. Feature of commencement exercises was exhibit of over 150 samples of student-made fabrics.

Arthur Israel, Philadelphia Textile, winner of NACM medal

Paul Dudley Kaley, N. C. State, winner of NACM medal

Leo Linden, Lowell Textile, winner of NACM medal

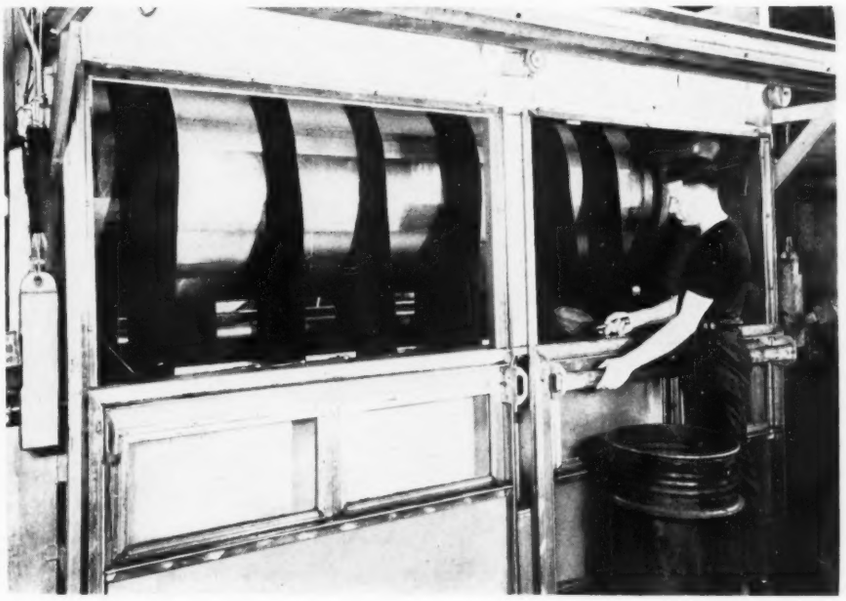
TEXTILE EQUIPMENT NEWS

Piece-Dye Kettle

Riggs and Lombard, Inc., Lowell, Mass., have recently announced a new Type TLBT stainless piece-dye kettle said to incorporate numerous design improvements. The machine has been found to be remarkably versatile, and is said to have dyed woolen and worsted fabrics ranging from 5 oz. flannels to 32 oz. meltons; from shirtings, through gabardines, to heavy men's-wear serges; and from knitted shoe lining to heavy knitted ski cloth.

Tangles or tie-ups are said to have been eliminated, due in part to the design of the tub, which is narrow from front to back, and in part to a large drum-type reel with partially knurled surface, which is also designed to eliminate slippage. Goods are said to balloon, move around, and change folds more readily than in previous models, thus obviating wrinkles, creases, and dye streaks.

It is stated that the ratio of dye liquor per pound of cloth in the new kettle is so exact that substantial savings in dyestuffs can be effected.



Piece-dye kettle (Riggs & Lombard)

Cotton Twister

The Model G Twister introduced by H & B American Machine Co., Pawtucket, R. I., at the recent Southern Textile Exposition includes a number of features and improvements said to increase its efficiency and operation. The machine, which is of the wet or dry type, is built with a 9 in. traverse. Framing is built extra low, the roller beam being only 37 in. from the floor. This height of frame for a long traverse is cited as aiding operators in creeling and operation. There is also an improved reversible tension device. Twist direction can be changed by a simple change in the wiring and head-end gearing.

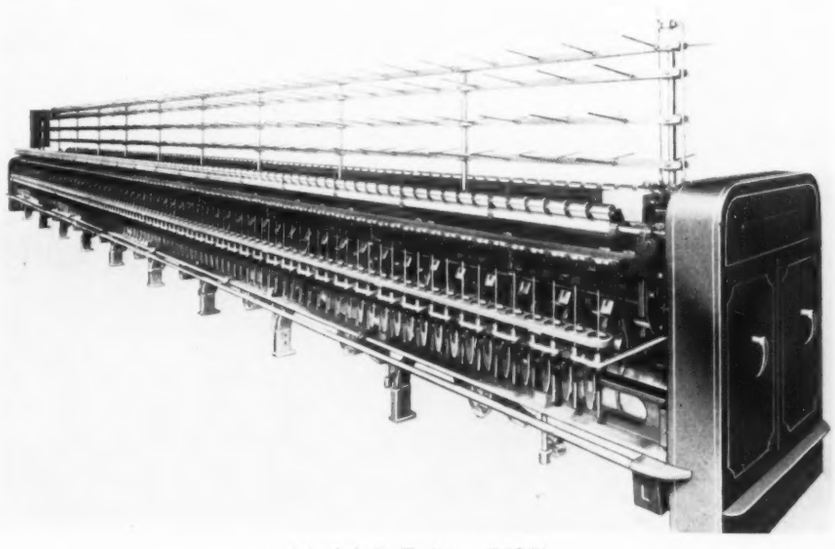
Cylinders and spindles are equipped with ball bearings. The cylinders are mounted below the spindle rail, to insure cleanliness without use of baffle plates. All builder parts have been reinforced to eliminate spring, and the builder chain has been increased in size and hardened to insure longer life. Ball-bearing thrust washers are used in the builder worm drive.

Water supply in the troughs is maintained by an automatic water-feed control. A newly designed lifting mechanism controls immersion rolls and drain rods; it is said to be conveniently adjustable and quickly raised out of the way when cleaning troughs.

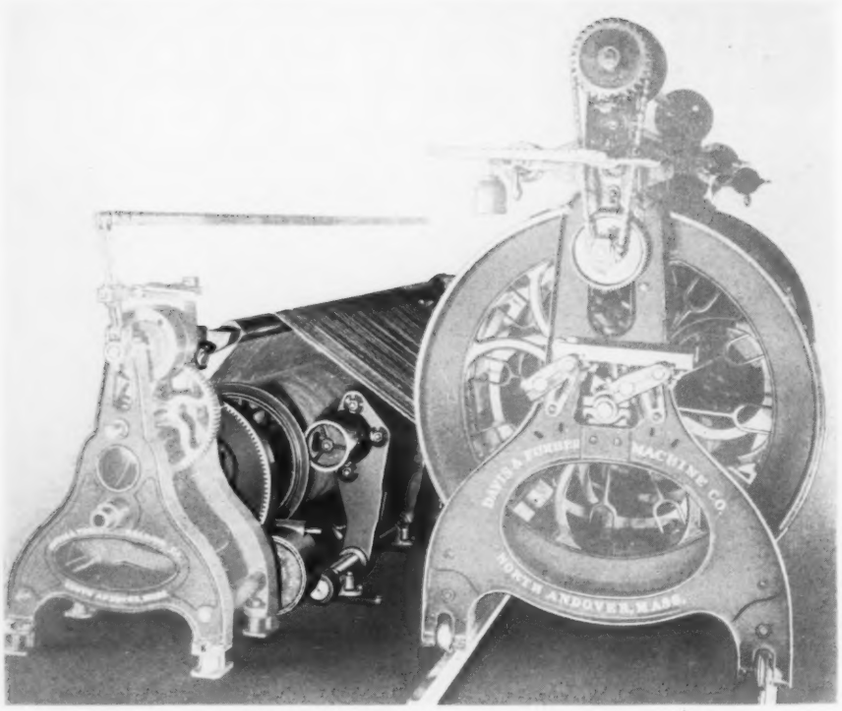
Warp Compressor

Increased weave-room production and decreased manufacturing costs are said to be achievable with a new spring-tension type warp compressor announced by Davis & Furber Machine Co., North Andover, Mass. These advantages, the manufacturers state, result from the fact that with the device longer warps can be put on loom beams, and because use of the compressor makes possible smoother warps and more solid beams. Up to 33% more yardage on woolen warps, and as much as 15% on worsted warps, is claimed.

The new device is a floor-type compressor, said to be applicable to any beamer. It can be used in beaming warps up to 30 in. in diameter. Chains, weights, and all top work have been eliminated, thus making operation sim-



Model G Twister (H&B)

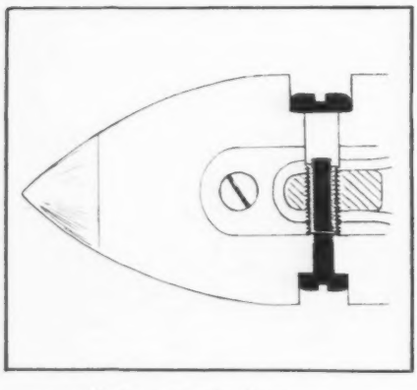


Spring-tension warp compressor (Davis & Furber)

pler, easier, and safer. Pressure load of the compression roll is applied by two heavy flat coil springs, mounted in a spring drum, which is entirely inclosed in a spring housing. A screw adjustment is provided to rotate the spring drum, winding up the spring for the desired pressure. Any desired compression is said to be readily obtainable, and to remain constant when once set. Construction is such that pressure is maintained about the same whether the beam is empty or full.

Lock Screw for Shuttle Grips

Southern Shuttles Div. of Steel Heddle Mfg. Co., Greenville, S. C., is marketing a telescopic lock screw for holding bobbin butts in shuttles. The device is designed to eliminate all vibration of grips in the wooden sockets and to stay tight throughout the life of the shuttle. The two telescoping screws enter the shuttle from opposite sides, the larger one threading into the butt of the shuttle clip and the smaller threading into the larger. Threads on the two telescoping screws are in opposite directions. The strap, or bobbin guide, is held by two vertical bolts, the threads of which are said to be jar-proof, eliminating up and down movement in the shuttle socket.



Telescopic lock screw (Southern Shuttles)

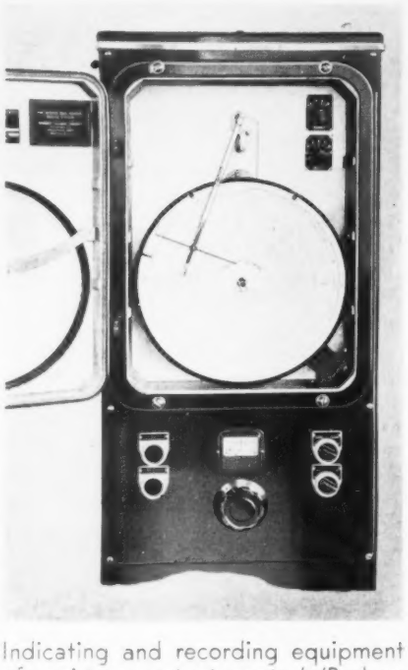
Slasher Moisture Control

A recent development of Barber-Colman Co., Rockford, Ill., is a moisture content controller for slashers, designed to compensate for the many variables affecting regain in slashed warps and to allow slashers to be operated at highest speeds at which proper moisture content can be obtained. Operating on the principle of electrical resistance, the control measures and records the moisture content of traveling warps, the accuracy of such measurement being within a fraction of 1%, it is stated.

The control can be applied in such a manner as to regulate the slasher speed or to regulate the temperatures of the drying cans; the former method is the one most commonly used.

The device consists of a recorder-controller housed in a steel cabinet that can be placed at any convenient location near the slasher, a pair of electrodes through which the electrical resistance is measured, and a speed-control motor which actuates the speed adjuster on the slasher. Various types of speed adjusters can be employed as required by the different makes of slashers and means of driving them.

When moisture content varies from that desired, the controller makes a rapid speed adjustment proportional to the amount of variation, and it makes this adjustment "hunting," it is said. The indicating and recording equipment is mounted so that it is plainly visible, and the electrically

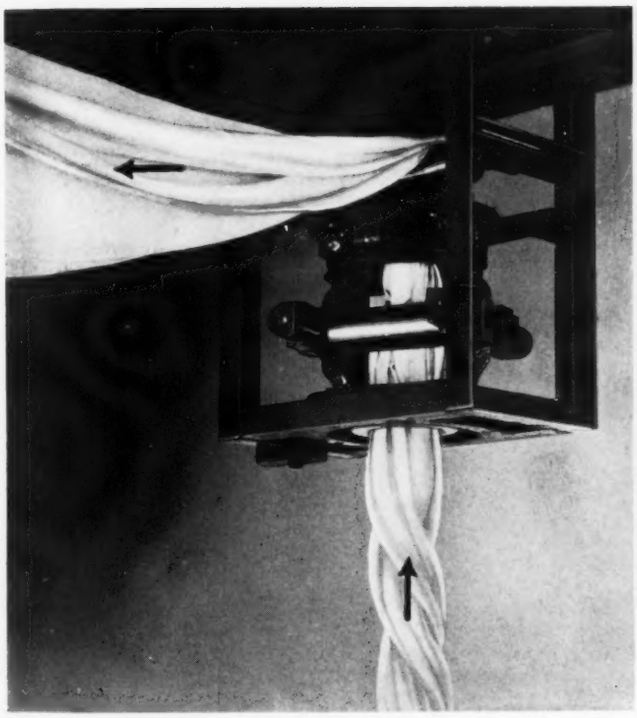


Indicating and recording equipment of moisture-content control (Barber-Colman)

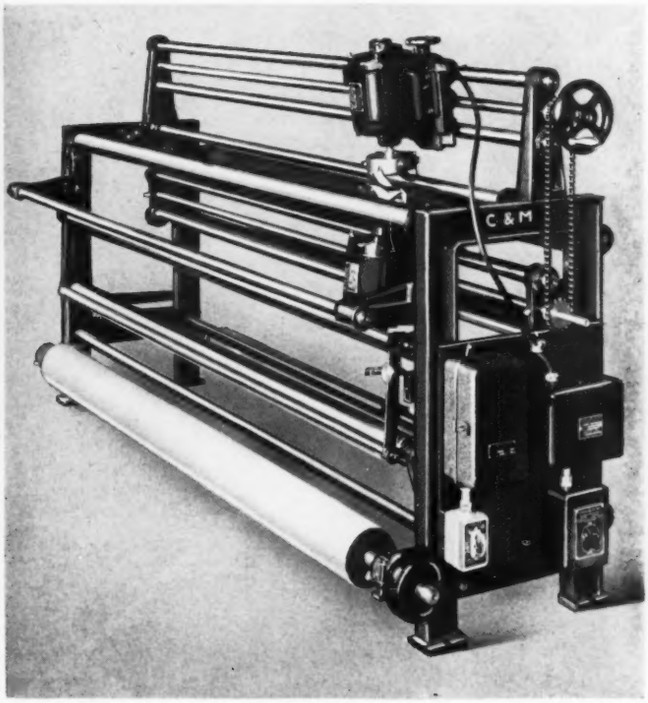
driven circular chart provides a complete 24-hr. record. The recorder pen is positively driven by a motor.

Bearings for Printing Machine Mandrels

Designed to eliminate a bothersome trouble spot of printing machines, new roller-bearing mandrel units have been announced by Fafnir Bearing Co., New Britain, Conn. The bearings are self-aligning and include a full complement of large rolls running in an alloy steel forging which acts as the outer race; a ball-thrust bearing takes loads imposed by sidewise adjustment. Easily installed in place of the original plain bearings, the new units are said to cut power bills and make pos-



For removing twist from cloth (Birch Bros.)



Selvage-loop cutter (Curtis & Marble)

sible increased speeds. Possibility of oil leakage is said to be eliminated, as the units are grease-lubricated.

De-Twisting Machine

Elimination of excess twist in fabrics being run into a scutcher for opening up and folding can be accomplished with a recently announced de-twisting machine, according to the manufacturers, Birch Bros., Inc., Somerville, Mass. The machine consists of a frame supporting two raceways. In these, a cage consisting of poteyes and a pair of rolls, rotates.

The machine is driven by a ¼-h.p. reversible motor, and a conveniently placed lever switch makes it possible for the operative to rotate the cage in either direction, as dictated by the direction of twist in the cloth. By causing the cage of the de-twister to rotate in opposite direction to the twist, the twist is removed before the fabric reaches the opening machine. All moving parts are fitted with oilless bushings or grease-sealed ball bearings, and the two rolls are fitted with springs applying pressure on either end to keep the rolls in contact with the material from which the twist is being removed.

Two types are available: horizontal, for installation between poteye and opening machine; and vertical, for installation where the cloth comes from a truck or bin in a vertical line.

Selvage-Loop Cutter

For cutting open selvage loops, a machine incorporating electronic control is being marketed by Curtis & Marble Machine Co., Worcester, Mass. Cloth is run through the loop cutter prior to shearing; after the loops are cut open, the ends of yarn are removed in the shearing operation.

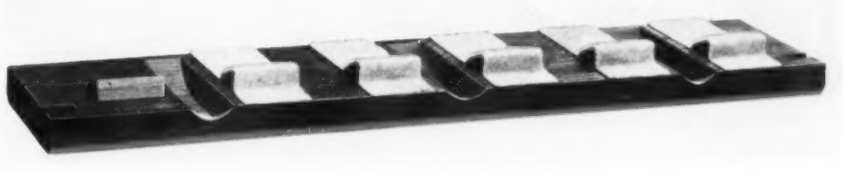
The machine employs two revolving cutter heads with special knives. The cutter heads, mounted directly on the shafts of vertical ball-bearing motors, are located just above and below the selvage having the loops to be cut. Both are set at a slight angle from the vertical. By means of a hand wheel, both cutters are simultaneously moved in and out when goods vary in width. For passing seams, the cutters may be reversed either manually or by means of an automatic control.

Clearer Board

Recently introduced by W. D. Dodenhoff Co., Greenville, S. C., is a new type clearer board for use with Whitin long-draft spinning equipment. The unusual V-shaped blocks covered with clearer cloth are said to make the boards instrumental in reducing breakouts, work stoppages, and waste, besides performing the usual job of removing excess fly and clearer waste. It is stated tests have shown appreciable increases in breaking strength and uniformity of yarn spun on frames equipped with the new clearer boards.

Finish for Travelers

National Ring Traveler Co., Providence, R. I., has announced a new finish for spinning and twisting travelers. It is known as the National-Etartnep finish. Tests which have been made are said to show that the chemical penetration of the new process imparts a lubricating factor which in turn gives greater traveler life and easier operation by reducing frictional contact between traveler and ring. The brilliant jet black color affords contrast between ring and traveler, which it is stated facilitates making of stroboscopic observations and other



Clearer board (Dodenhoff)

technical studies. A high degree of rust-resistence is cited as a feature of the finish.

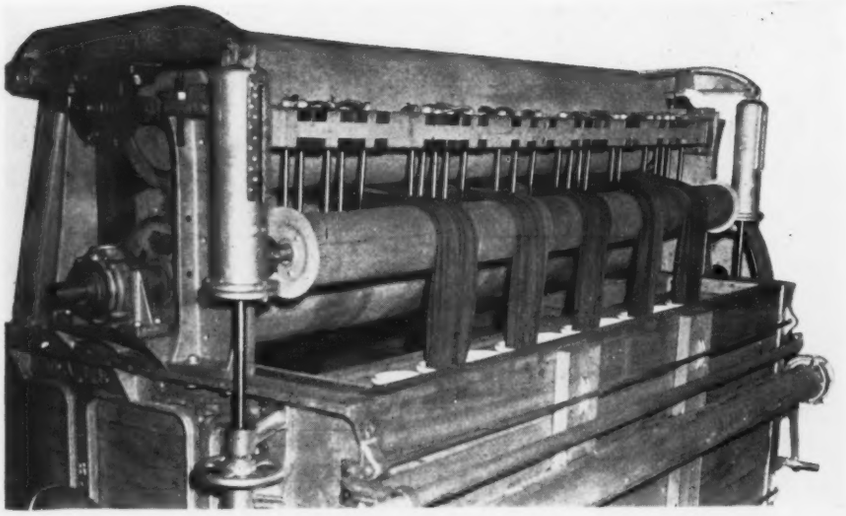
Electric Tachometer

For measuring speed of cloth finishing and of many other processes, General Electric Co., Schenectady, N. Y., has introduced a low-price, a.c., tachometer-generator equipment. The tachometer consists of a small generator, a rectifier-type indicator, and an adjusting rheostat. It can be coupled, geared, or belted to the machine or motor, and has an approximately linear speed-voltage curve from 500 to 3,500 r.p.m.; with suitable speed changes, the instrument will cover any speeds within a 7 to 1 speed range. The indicator can be calibrated with special designations to suit individual requirements. The instrument gives speed readings for both directions of rotation.

Electric Tachometer (G.E.)

Guides for Washing and Dyeing Machines

Rodney Hunt Machine Co., Orange, Mass., has announced an adjustable guide for washers and dyeing machines. Guides are said to be instantly adjustable for any number of strings, and to give complete and exact control of the cloth as it goes through the machine. They can be set to squeeze the cloth so that it balloons out as it goes through the guides, thus eliminating creases and wrinkles and giving more uniform washing and dyeing. It is claimed that adjustments of this type also prevent excessive wear on the rolls, eliminate grooves, and thus increase roll life and machine efficiency.



Partly assembled washer with adjustable guides (Rodney Hunt)

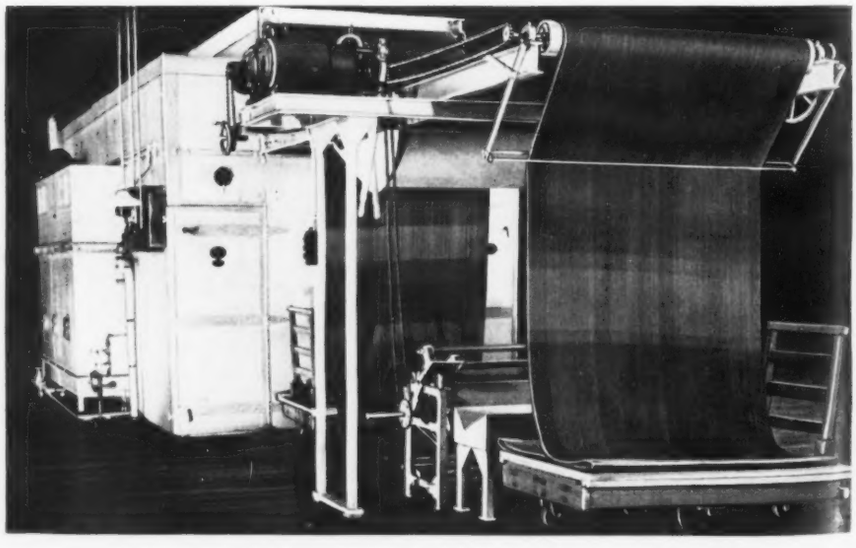
Cloth Conditioner

For restoring natural moisture to fabrics after finishing, a concentrated air conditioner designed primarily for worsteds and woolens, but suitable to all textiles, is being marketed by Bridges-Wilson Corp., 104 Hanover St., Boston. The conditioner consists of a heavily insulated inclosure; a system for providing a concentrated flow of warmed moistened air over both the face and the back of the fabric, in such a manner as to treat both surfaces uniformly; and mechanisms for feeding and delivering at the same end, with a single operator, at a high rate of production. Over-all dimensions are approximately 23 ft. long, 11 ft. wide, and 8 ft. high. Production of up to 16 yd. per min. of 12 oz. worsted fabric is cited. It is stated that any amount of moisture up to 11% can be added. Controls for driving rolls and maintaining moisture content and air velocity are automatic in operation.

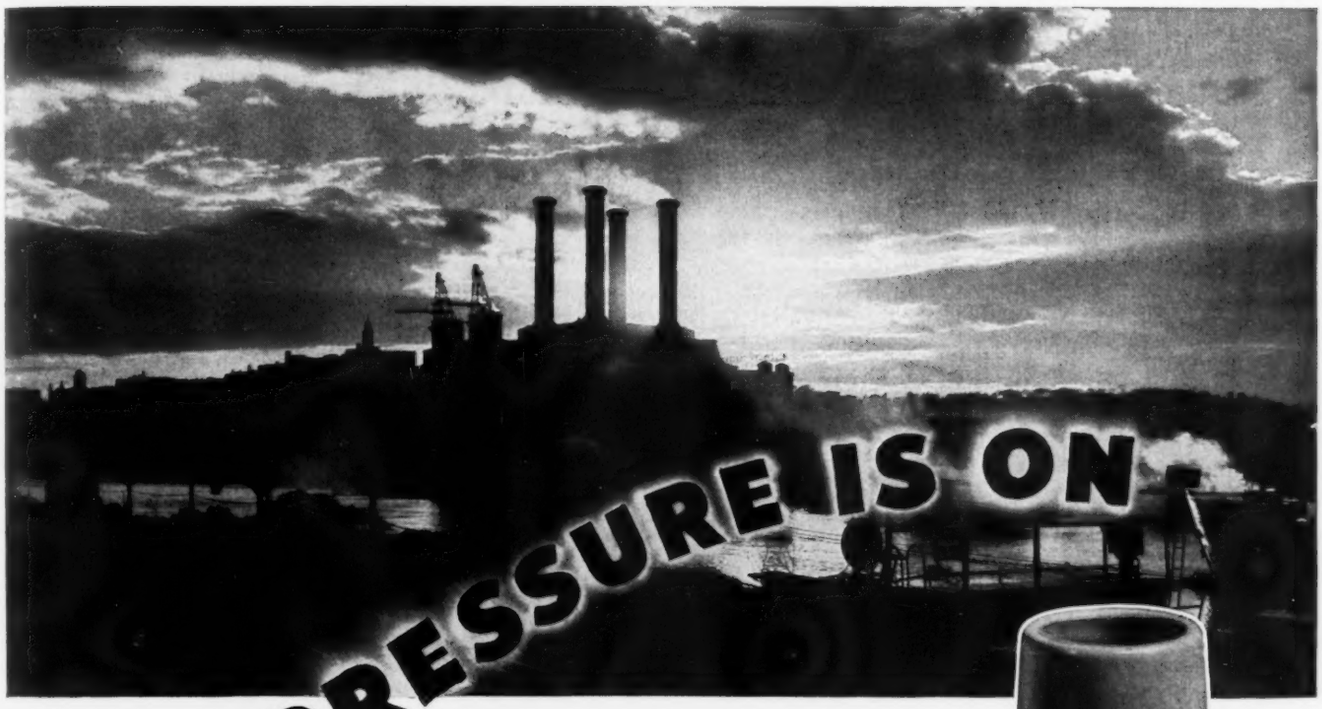
Handle, finish, and drape are said to be improved by the process.

Regain Measurement of Tentered Cloths

Adaptation of its Moist-o-Graph equipment for measuring regain to the tentering process has recently been announced by Brown Instrument Co.,



Fabric conditioner (Bridges-Wilson)



All over America, lights are coming on at night . . . that darkened areas over the rest of the world may come to light again. Democracy is not going to fail by default.

"The pressure is on"— on American Industry and everyone connected with it.

As an important cog in the manufacture of textiles, Sonoco is keeping in step with every changing phase of development, production and service.

sonoco
SERVES THE WORLD
PAPER CARRIERS

SONOCO MAKES *EVERYTHING* IN *PAPER CARRIERS*

SONOCO PRODUCTS COMPANY

BRANTFORD ONT. | HARTSVILLE S. C. | MYSTIC CONN.

DEPENDABLE SOURCE OF SUPPLY

Wayne & Roberts Ave., Philadelphia. As applied to tenters, the system consists of a recording instrument, a power unit, and a detector roll.

In measuring regain of tentered cloth, a detector roll is so mounted as to contact the cloth as it leaves the tenter frame. This is connected with the power unit by means of a special high tension cable. As the regain of the cloth varies, its electrical resistance changes proportionately, and the Moist-o-Graph measures and records these variations.

The equipment is said to improve quality by eliminating overdrying, reduce rejects, and eliminate the necessity of re-tentering cloth due to its having been originally over-dried or run too wet, and eliminate the necessity of continual sample taking by the laboratory.

Staple Drafting System

A drafting system for drawing frames and speeders being used to draft $\frac{7}{8}$ to 3 in. viscose and acetate rayon staple fibers is being offered by Gossett Machine Works, Gastonia, S. C. It substitutes four sets of rollers in place of the conventional three. A device used in connection with the system makes it possible easily to adjust the rollers for staples of different lengths.

The system is said to make possible better running work and increased production. It can be applied to frames already in place, and the manufacturers state it will pay for itself in a short time.

Useful Accessories for Textile Mills

A new babbit-bearing common flat box incorporating streamlined design, compactness, removable shim for adjusting, and other features is available from stock in 24 sizes for shafts of $\frac{1}{2}$ to 3 in. in diameter, from Link-Belt Co., 307 N. Michigan Ave., Chicago.

Motorized speed control devices in sizes from $1\frac{1}{2}$ to $7\frac{1}{2}$ h.p. have been added to the line of Ideal Commutator Dresser Co., Sycamore, Ill. They are recommended where the drive must be mounted on the ceiling, or in back of or inside equipment. A two-button switch controls all speed charges.

Industrial fluorescent units comprising two 100-watt lamps giving a lumen output of over 8,400, and featuring reflectors drawn from a single piece of metal, and a new type latch assembly connecting reflector and housing, has been announced by Hygrade-Sylvania Corp., Salem, Mass., and designated No. F-235.

A triple-voltage motor for compressor drives has been announced by General Electric Co., Schenectady, N. Y. It is ordinarily supplied for 199, 208, and 220 volt operation, and is said to be suitable for use in applications which permit an adjustment between torque and current values for a given line voltage.

Quickly detachable sheaves for V-belt drives have been designed by Worthington Pump & Machinery Co., Harrison, N. J. Extreme simplicity of construction is claimed, and suitability for any application where quick mounting and demounting of sheaves is desirable.

A fully electric wire-rope hoist, known as the P&H Zip-Lift, is announced by Harnischfeger Corp., Milwaukee, Wis. It is light enough for a man to carry, and can be mounted rigid, or on hook or trolley; it operates with pushbuttons, and is powered from an ordinary light circuit. Features include double brakes, automatic limit switch, and fully enclosed construction.

New Dyes and Chemicals

Mordant

A new substitute for tartar emetic for mordanting textiles is announced by Pfaltz & Bauer, Inc., Empire State Bldg., New York. This product, known as Antim, is said to have the following advantages: (1) The fiber assumes a much brighter appearance after mordanting, which leads in the case of prints to purer whites, and favors the production of brighter shades. (2) The brilliance and fastness of colors are improved. (3) Atim, is readily soluble. (4) Goods mordanted are more evenly dyed.

Olive-Oil Substitute

Development of an American-made product replacing olive oil for technical purposes is announced by Werner S. Smith Co., Cleveland, Ohio. This product, known as Olev-ol, is made by separating the various fatty acids from domestic vegetable, animal, and marine oils and recombining them in the proportions found in olive oil. This is said to result in a product which has the same physical and chemical characteristics as olive oil.

Starch Products

Three new starch products have been announced recently by National Starch Products, Inc., 820 Greenwich St., New York. The first, Fiberjel, is a cold-water-swelling product for use in warp sizing and finishing formulas. It is said to form a strong, tough, flexible film, with good binding qualities. For warp sizing, it is suggested that 5 to 10 lb. of starch in the formula be replaced with Fiberjel. For finishing cotton fabrics, 10 to 20% based on the weight of starch used is suggested.

The second product, known as Fibertex, is a starch gum for use in finishing cotton fabrics. It is available in various viscosities or fluidities to meet specific finishing requirements.

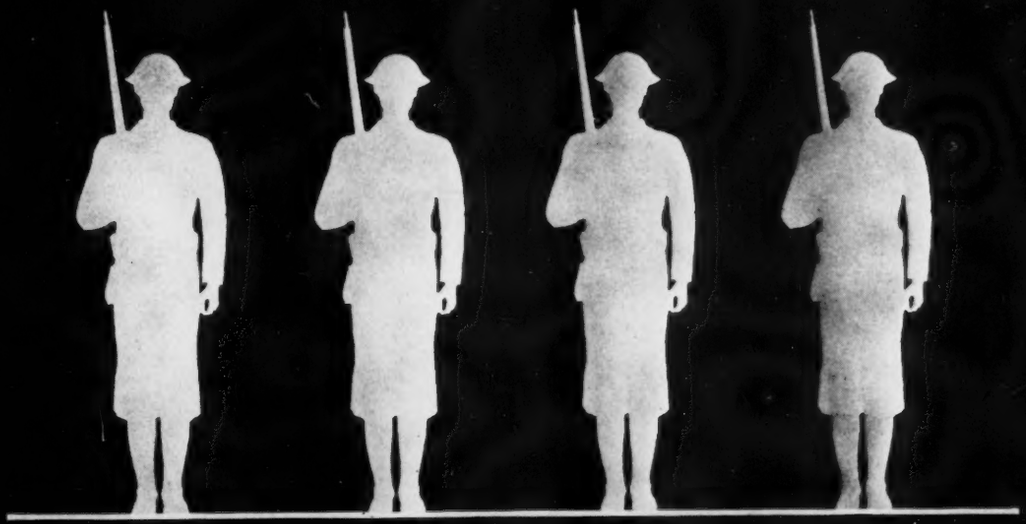
The third product, known as Amylex, is a slow-congealing starch product made expressly for warp sizing. The following advantages are cited: (1) cooks quickly—20 to 30 min. at the boil; (2) requires not more than half present fat content in a given formula; some weaves require none at all; (3) penetrates just enough, and also coats the yarns; its cohesiveness increases the binding power for loose fibers; (4) produces smooth-surfaced yarns which weave well; (5) greatly increases tensile strength, because of the film-strength of product and reduced fat-content of size; (6) reduces shedding; (7) bright-colored yarns retain maximum depth of shade due to the transparency of films; and (8) desizes readily.

Calco Color

Calco Chemical Division, American Cyanamid Co. announces the following new product: Calcogene Green YSCF, a copper-free sulphur dye, having high resistance to wet finishing operations, thus making it particularly useful in dyeing of rayon-wool blends.

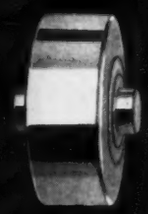
Tennessee Eastman Acetate Colors

Tennessee Eastman Corp. announces the following new acetate dyes: Eastone Yellow 6G, Yellow 3GM, Rubine R, Rubine C, Red B, Orange 2R, and Orange 3R. All are stable colors, showing good permanence even when steamed under pressure. In common with other Eastone dyes, they can be



Speeding Textiles for Defense

These most recent "new departures" mean faster production of clothing and other fabrics for the military—faster production, because these specialized bearings assure higher machine speeds, less maintenance expense and an end to lubrication troubles. Thus, they contribute to the comfort and health of our citizen soldiers—these textile machinery bearings of quality. New Departure, Division of General Motors, Bristol, Connecticut



New Departure

THE FORGED / STEEL BEARING

stripped by soluble zinc formaldehyde sulphoxalate, and discharged by either the zinc or sodium formaldehyde sulphoxalate methods.

General Dyes

General Dyestuff Corp. announces the following new products: Celliton Violet 3RA, a dispersed, direct-dyeing acetate violet of bright reddish shade; possesses very good dyeing and penetrating properties and has good affinity, even at low temperatures.

Benzoform Blue BR Extra, a direct color recommended for the dyeing of cotton and, in particular, of rayon; when aftertreated with formaldehyde and acetic acid, Benzoform Blue BR Extra produces bright shades of a reddish blue of comparatively good fastness to washing, water, and perspiration.

New Publications

Guide for the Operating Executive

HOW TO SUPERVISE PEOPLE, by Alfred M. Cooper; McGraw-Hill Book Co., Inc., New York; $1.75.

This is a valuable condensation of comprehensive study and psychological analysis of cause and result in supervisory work. It should be made available to every section hand, overseer, foreman, and superintendent in every cotton mill.

Mr. Cooper bases his work upon the experiences of approximately 1,000 supervisors who gave him the benefit of their approach to the problems arising from their work. These data he has divided into chapters in which he discusses the responsibilities of a supervisor; the importance of maintaining health among subordinates; development and upholding of group morale; cooperation; and other matters a knowledge of which make up qualities of leadership. He includes a series of questions and suggests they and similar questions be solved by group discussion.

This book could have an important bearing on industrial relations if it were widely distributed. Certainly any plant which makes it available to its operating executives should derive concrete benefits from Mr. Cooper's study.

Properties of Cotton

TESTS OF IRRIGATED AND RAIN-GROWN AMERICAN UPLAND COTTON, CROP OF 1939; U. S. Dept. of Agriculture, Agricultural Marketing Service and Bureau of Plant Industry, Washington, D. C.

The relative merits, qualities, and properties of irrigated and rain-grown American upland cotton have been a subject discussion among mill men for many years. This report gives definite and significant comparison data on irrigated and rain-grown cotton, based on 81 test lots composited from approximately 20,000 bale samples collected from the crop of 1939. On each lot, fiber studies including length and length variability, strength, weight per inch, and percentage of thin-walled fibers were made; each lot was spun into three counts of yarn and was subjected to manufacturing tests for waste, yarn strength and uniformity, and spinning qualities. Cloth woven from the yarns was compared and photographed in the gray, and finally was dyed and finished.

Teeming with Ideas

FUNDAMENTALS OF DRESS, by Marietta Kettunen; McGraw-Hill Book Co., Inc., New York and London; $3.00.

This is a remarkably helpful handbook on the dressing and grooming of the modern woman—for budding consumers in particular.

An instructor in art, Miss Kettunen would be expected to shine in the application of color, line and design theories to the selection of appropriate clothes for the individual. And she does, in the first part of the book. However, the reader may be surprised to find equally adroit handling of the numerous other phases a woman must consider in order to be well-dressed.

Sketchily, Miss Kettunen tells the story of fabrics from raw material through weaving, design, selection and clothing construction. Interestingly, she traces the history of costume and fashion from origin to modern times. Finally, she brings into play such considerations as personality, occupation, budget, care of the body, cosmetics and wardrobe planning. As a whole, we might call the author the Emily Post of fashionable, well-groomed appearance.

Any high-school or college girl would find this a splendid guide for herself. She'd also find it a stimulant to further reading. The "suggested readings" list mentions almost 100 sources of information, any of which will carry her farther into a subject of her particular fancy. Certainly, it is a "liberal education" for the ready-to-wear or accessories salesperson. There's meat here, too, for "the trade" that creates and distributes the wares of fashion. It's teeming with ideas for a designer—a fashion copywriter—a merchant.

"Make Things Happen," Key to Successful Selling

STRATEGY IN SELLING, by J. C. Aspley; The Dartnell Corp., Chicago, Ill., 7-volumes, boxed, $6.00.

Many years ago a theatrical press-agent whose name is now at the top of the list of public relations counsels, put his client's name on the front pages of newspapers throughout the country by having her order milk in large quantities and then fail to pay the bill. When she was haled into court and asked why she ordered so much milk she explained that she took milk baths! Overnight

$26 CASH A YEAR—that was what Henry Bracey, sharecropper of Warren County, Miss., cleared in 1939. There are 16 members of his household, shown above on the porch of their 3-room shack. This is one of the families discussed in the book published by the Ladies' Home Journal under the title "How America Lives," reviewed in these columns last month.

"... and we've discovered the big part that a small needle plays in knitting since we began using T M W Needles."

Anna Held became famous because a press-agent "made things happen."

In this set of little books, the author tells how famous salesmen have made things happen and indicates clearly that the salesman who is going to the top of the pile needs to combine a flair for the dramatic with good, hard business sense.

At the end of each volume is a "check-chart" to enable the reader to make a self-analysis of his sales capabilities.

Any salesman who is able to profit by the experience of others will certainly profit from a careful reading of "Strategy in Selling." The set, and the companion sound-slide films which Dartnell offers should interest sales managers looking for new "working tools" for their men.

WILLIAM L. WETZELL, JR., now salesman with Foster Machine Co. at firm's Charlotte office.

News of Suppliers

U S Bobbin & Shuttle Co., Lawrence, Mass., announces that Albert R. Breen will again represent it in the Middle West. Mr. Breen will again be located at 80 East Jackson Blvd., Chicago.

Warwick Chemical Co., West Warwick, R. I., has transferred Donald S. Collard, for a number of years superintendent in charge of manufacturing at the West Warwick plant, to its Rock Hill, S. C., plant, with title of resident manager.

Industrial Supply Co., Clinton, S. C., has been appointed southern representative of the Felters Co., Boston, Mass.

Jim Handy Organization, Detroit, Mich., has prepared a new "Selling in America" program, centering on five talking slide-films which include selling demonstrations of many varieties of textiles.

Foxboro (Mass.) Co. has added Frank Revell and Erwin L. Gehrke to its staff of sales engineers at the New York office. Mr. Revell was formerly with the instrument maintenance department of Calco Chemical Co.

Scott & Williams, Laconia, N. H., held its annual fish luncheon for representatives of hosiery selling organizations on May 16 at the Arkwright Club, New York. B. J. Faucette, vice-president in charge of sales, was host. There were 65 in attendance.

Hubinger Co., Keokuk, Iowa, has appointed Horace R. Owings (Clemson '33) to its Textile Service Division. His headquarters will be at Gray Court, S. C. He will work in association with Chester M. Goodyear, southeastern sales representative of the company, whose headquarters are in Atlanta, Ga.

Foster Machine Co., Westfield, Mass., has appointed William L. Wetzell Jr., as salesman, with headquarters in the company's Charlotte, N. C., office, where he will be associated with Edward C. Connor in covering the territory served by that office. Mr. Wetzell is a graduate of the Textile School of N. C. State College, and was night superintendent of Morganton Full Fashioned Hosiery Co. and Garrou Knitting Mills before joining Foster.

Link-Belt Co., Chicago, has appointed Lawrence M. Ewell as general manager of eastern division operations with headquarters in Philadelphia. He is succeeded as export manager and head of the company's New York office by his assistant, Carl A. Woerwag.

Glyco Products Co., Brooklyn, N. Y., has appointed Dr. Joseph DuBose Clark as chemical director in charge of research and development. He has been engaged in industrial research for many years.

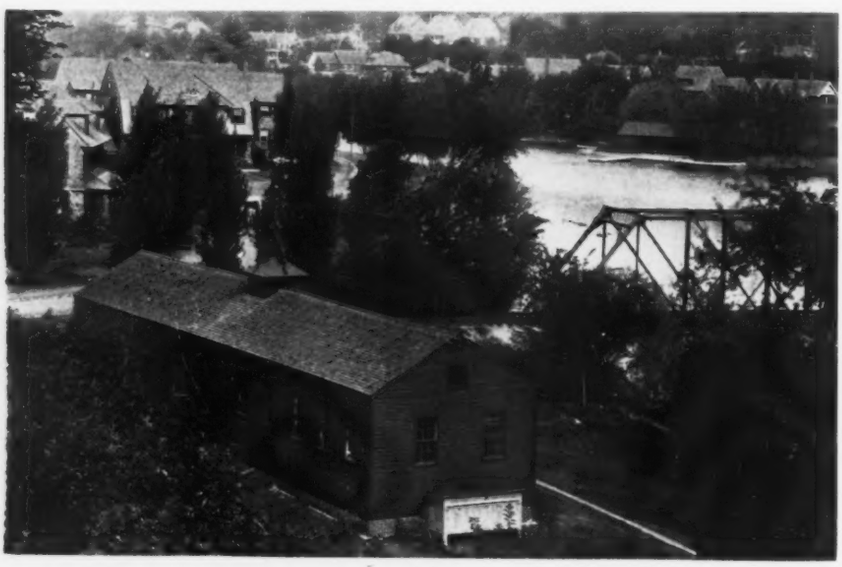
Mixing Equipment Co., Rochester, N. Y., has named E. S. Bissell as vice-president of the company. Prior to his promotion, Mr. Bissell was technical sales manager.

Hercules Powder Co., Wilmington, Del., has elected Petrus W. Meyeringh head of the Export Department, as a vice-president and member of the company's executive committee. Albert E. Forster, general manager of Naval Stores Department, and Luke H. Sperry, chief engineer of the company, were elected directors.

B. F. Goodrich Co., Akron, Ohio, has appointed George T. Kilmon as assistant secretary, and Edward M. Martin as assistant treasurer.

Chemical Processing Co., Charlotte, N. C., has appointed Fred Oates, of Spartanburg, S. C., as its South Carolina sales representative.

Quaker City Chemical Co., Ltd., Hamilton, Ontario, has appointed Walter W. Metcalfe as technical sales representative. He was formerly em-



DRAPER CORP. last month celebrated completion of 125 years in business. It was founded in June 1816. The above building in Hopedale, Mass., was the first independent shop of the company which it occupied 100 years ago; previously its products had been made in other shops particularly that of the old Boston Mfg. Co., in Waltham. Draper now not only has its large, modern plant at Hopedale, but also plants at Atlanta, Ga., and Spartanburg, S. C. The early building illustrated has twice been moved, but is still near its original site. The Draper business began with the invention in 1816 by Ira Draper of the "self-moving" temple, enabling one weaver to run two looms instead of one.

"The shortest answer is doing"
HERBERT

The new READING 30-Section 51-Gauge Full-Fashioned Knitting Machine produces 104 per cent more volume and 156 per cent more value than ordinary 20-section 42-gauge machines . . . . . *And remember: Money invested in modern machinery serves as insurance for your total investment.*

TEXTILE MACHINE WORKS • READING, PA.

ployed by E. F. Houghton & Co., Ltd., Toronto.

Monsanto Chemical Co., Rubber Service Department, Akron, Ohio, has promoted C. W. Christensen, assistant general manager of sales to general manager of sales. James F. Hand of the Rubber Service sales department has been named assistant general manager of sales, succeeding Mr. Christensen.

Worthington Pump & Machinery Corp., Harrison, N. J., has appointed R. M. Cleveland, with the company for 24 years, as manager of its Boston office. He succeeds W. A. Finn who has been called to active duty as a lieutenant in the Navy.

Crane Co., Chicago, has elected V. P. Rumely as vice-president in charge

V. P. RUMLEY, newly elected vice-president of Crane Co., Chicago.

of manufacturing, to succeed J. H. Collier, recently made president. Mr. Rumely has been works manager of the Crane Chicago plant for the last four years, during which he has been closely associated with Mr. Collier.

Wyckoff Drawn Steel Co., Pittsburgh, Pa.—Alden F. Erikson, for the last seven years district sales manager for Wyckoff in Boston and New England, has been called to active duty with the 68th Coast Artillery Anti-Aircraft Regiment with rank of Major. Theodore C. Cederholm has been named to succeed Major Erikson as district sales manager.

Greene, Tweed & Co., manufacturers of Palmetto and other brands of packings and special tools, have moved plants and offices to the Palmetto Bldg., Bronx Boulevard and 238th St., near Woodlawn, in New York City.

Cochrane Steam Specialty Co., Boston, has added Samuel Reid to its sales engineering staff, to handle products of Cochrane Corp., Hays Corp., Northern Equipment Co., Reliance Gauge Column Co., and Vulcan soot blowers.

STUART W. RABB, now general sales manager of W. D. Dodenhoff Co., Greenville, S. C.

W. D. Dodenhoff Co., Greenville, S. C., has named Stuart W. Rabb as general sales manager. Mr. Rabb was formerly general manager and vice-president of the Erlanger group of mills. For the present Mr. Rabb will devote most of his efforts to the Check-Master Division. Mr. Rabb will maintain offices at the company's headquarters in Greenville.

McQuay, Inc., Minneapolis, Minn., has appointed O. H. "Dick" Halberg as the McQuay representative for New York, Brooklyn, Staten Island and the Long Island areas. Mr. Halberg had previously for 11 years been representative for Trane Co. in the same territory.

Continuous-Process Viscose Rayon

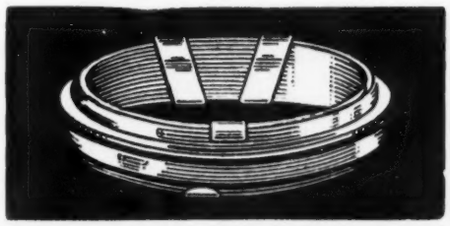
Photographs and flow charts are employed effectively in a new booklet "Uniformity Rides the Reels," issued by Industrial Rayon Corp., Cleveland, Ohio, to show the difference between conventional methods of producing viscose rayon and the continuous spinning and processing method employed by Industrial at its Painesville, Ohio, plant. The booklet is divided into three sections. The first illustrates the chemical operations by which cellulose is prepared for spinning into rayon. The second shows the many discontinuous operations required for the processing of viscose rayon by conventional methods. The third describes and illustrates the continuous process, lists the advantages of continuous spinning and processing, and gives important facts about rayon yarns and fabrics.

Manhattan Rubber Wins Advertising Award

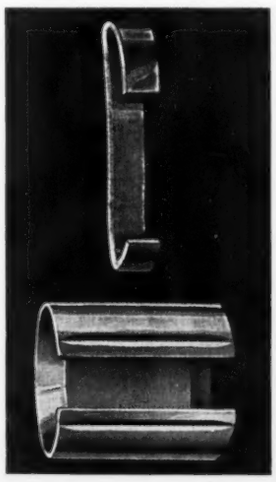
The annual award of the National Advertising Agency Network for "the best advertising campaign in business papers" was awarded to the Manhattan Rubber Mfg. Division of Raybestos-Manhattan, Inc. of Passaic, N. J., at the recent convention of the Network in Chicago. 151 campaigns from all over the country were entered under this one classification, through the 25 member agencies. The campaign for Manhattan Rubber was entered by its agency, the Roland G. E. Ullman Organization of Philadelphia. The campaign ran in a total of 58 business and industrial magazines and featured the extensive and diversified lines made in Passaic. This is the second time in four years that the company has won advertising honors; in 1937 its campaign was ranked second in its field at the National Industrial Advertisers Association Convention. The advertising is under the direction of James J. DeMario, advertising manager.

THE FIRST OF FIVE nickel-clad steel tank cars made by American Car & Foundry Shops, Milton, Pa., and the first all-welded units of this material. These cars are designed specifically for carrying a variety of chemicals and other products whose color and purity must be protected against metallic contamination. They are provided with 6 in. of spun glass insulation contained in an outer casing of steel. Steam heating coils are buried within the insulation and contact the exterior of the tank so that the lading can be heated, if necessary, for easy emptying. The cars will carry a wide range of alkalies, phenol, solvents, syrups, and the like, without danger of metallic contamination.

The Hunting Cheetah is the *fastest* animal traveler...



Above—Bowen *Patented* Vertical Offset Traveler—After exhaustive tests under actual running conditions, the Bowen Patented Vertical Offset Traveler has proved its worth in the twisting of cords and plys. Based on the true mechanical principle of taking a diagonal position with relation to the ring, presenting a bearing surface over the full width of the Traveler. This design prevents gripping or binding—gives an even tension—an evener rounded product—longer life to the traveler. Send for samples and prices.



Left—Bowen—*Patented*—Bevel Edge—The Bowen Patented Bevel Edge feature of U. S. Ring Travelers produces ideally smooth, even yarn. There are no angular edges to flatten the end. There are no split ends in throwing rayon and silks—no fly waste in the spinning and twisting of cotton, wool, worsted, asbestos, kindred fibres. Made and stocked in all sizes and weights for all kinds and counts of yarns.

Right—*High*—Ne-Bow—*Patented* Vertical Ring Traveler—Developed to meet the particular needs of the silk and rayon trade in the process of throwing, due to the recent adoption of the vertical ring, particularly of the lubricating type.

By eliminating the pivoting action of the traveler, the traveler is at all times kept in close contact with the groove or device for lubricating the ring and assists in drawing therefrom the lubricant, distributing the same evenly over the entire inner surface of the ring; promoting a longer life to the traveler and a more even twist.

U. S. TRAVELERS

Meet the *Speed* test—the *Quality* test—and the *Economy* test!

U. S. Travelers reduce the cost of producing high quality yarns because they are designed and made for fast, smooth work . . . with the closest attention to every detail. They are the result of years of experience of men who know the needs of the textile industry in this field—that is why they are the choice of experienced textile operators the country over.

• *Sold under the trade names*

Bowen Round Point Travelers	Bowen Patented Bevel Edge
Bowen Square Point Travelers	Bowen Patented Ne-Bow Vertical
Bowen Improved Vertical Bronze	Bowen Patented Vertical Offset

Bowen Flat Oval and Round Wire Travelers

U. S. RING TRAVELER CO.
PROVIDENCE RHODE ISLAND

Amos M. Bowen, Pres. and Treas.

SALES REPRESENTATIVES:

NEW ENGLAND:	
Carl W. Smith	both c/o U. S. Ring Traveler Co.
Herbert J. Smith	P. O. Box 1187 Providence, R. I.
SOUTHERN:	
William P. Vaughan	P. O. Box 792 Greenville, S. C.
Oliver B. Land	P. O. Box 158 Athens, Georgia
Torrence L. Maynard	P. O. Box 456 Belmont, North Car.
William H. Rose	P. O. Box 792 Greenville, S. C.
MID-ATLANTIC:	
M. Lee Bolton	P. O. Box 7234 Philadelphia, Pa.

A Traveler for Every Fibre

FREE FOR THE ASKING

Readers interested in literature reviewed on this page may secure copies by writing to Textile World, 330 West 42nd St., New York, giving their company connection, title of item desired, and date of issue in which it was reviewed.

Solderless lugs and connectors in a redesigned line comprising five sizes are described in Circular 332, issued by Trumbull Electric Mfg. Co.

Purchasing supplies and paying for them is simply described in a 10-page illustrated booklet which contains data on methods to be followed and precautions to be taken; issued by Todd Co.

Magnetic starters for induction motors said to give protection from overheating caused by mechanical overloads, and to be safe, dependable, easy to service and install, are described in leaflet GEA-841K, distributed by General Electric Co.

Strip-chart recorders for measuring and recording d.c. amperes and milliamperes, d.c. volts and millivolts, pressure, liquid level, flow, mechanical motion, and for remote recording, are described in Bulletin 570, issued by Bristol Co.

Lint-free motors between 1½ and 15 hp. are described in a new 4-page folder No. D.D. 3175, and offered by Westinghouse Electric & Mfg. Co.

Conveying of loose-materials positively and continuously is the function of the Bulk-Flo conveyor announced by Link-Belt Co. and described in Data Book 1975.

Sewing equipment in national defense, and a description of sewing machinery in Auburn Hosiery Mills, are included in the June issue of *The Needle's Eye*, published by Union Special Machine Co.

Circuit breakers operating by means of compressed air are described in Data Sheet 33-680; oil circuit breakers for indoor service are covered in Data Sheet 33-216; both offered by Westinghouse Electric & Mfg. Co.

Ball bearings, and their handling, mounting, and lubricating, are the subjects of a 16-page shop manual containing photographs, diagrams, and tables; available from New Departure Div., General Motors Sales Corp.

Compressors and vacuum pumps for industrial purposes are described and pictured in Catalog 7502-L, which also includes descriptions of considerable accessory equipment; offered by Ingersoll-Rand Co.

V-belt installations on tenter frames said to have increased production 30% are pictured and briefly described in the June issue of *Industrial News*, published by Gates Rubber Co.

Power pumps in horizontal, duplex plunger types are pictured and described, and specifications given, in Bulletin W-412-B30, prepared by Worthington Pump & Machinery Corp.

Fluorescent troffers in a variety of sizes designed to fill practically any installation requirement are described in Bulletin F-47 issued by Day-Brite Lighting, Inc.

Adjustable speed drive for a.c. circuits, between 1 and 15 hp., for use over a wide speed range, are described in a 4-page bulletin No. DD-4063, prepared by Westinghouse Electric & Mfg. Co.

Rubber transmission belts are the subject of Catalog 2150, which contains data on selection, maintenance, storage, etc.; available from B. F. Goodrich Co.

White paint and better illumination are discussed in a 24-page file-folder which contains case-study photographs in a number of textile mills, as well as in other types of industrial plants; prepared by Sherwin-Williams Co.

Variable-speed devices for meeting industrial speed-control requirements are discussed in an illustrated mailing piece prepared by Reeves Pulley Co.

Switches in small, precision, snap-action types of large capacity are the subject of a 36-page illustrated catalog containing engineering data and price information; released by Micro Switch Corp.

Glow lamps are the subject of data sheet No. Y 0251, which gives specifications, technical data, and applications for which these lamps are suitable; available from Nela Specialty Div., General Electric Lamp Department.

Tools especially designed for textile-mill use are described in a catalog issued by Snap-On-Tools Corp.; special sections are devoted to requirements of loomfixers, spinning-frame fixers, twister fixers, spooler fixers, opening and picker fixers, card-room fixers, card grinders, etc.

Zeolite water softeners operated on a principle said to improve efficiency and increase capacity over that of former models are described and pictured in Bulletin 605, released by Elgin Softener Corp.

Air-blast circuit breakers are described and illustrated in a mailing piece which features their split-cycle speed, reduced maintenance cost, and added safety and economy of operation; leaflet offered by Allis-Chalmers Mfg. Co.

Corrosion-resistant properties of Tygon, which can be used as a lining for tanks, vats, etc., or as a paint for general industrial use where corrosion resistance is desired, are discussed in Bulletin 1610, prepared by United States Stoneware Co.

Valves, drains, and by-pass selection data and information on construction and application are included in a 42-page booklet which contains, in addition to text, diagrams, photographs, and tabular material; offered by Jenkins Bros.

Oil-retaining bearings in sleeve, flange, and thrust types are the subject of a new die list published by Bound Brook Oil-Less Bearing Co.; a feature is that length sizes are specified "any length up to".

Maximum working pressures for seamless steel tubes, nipples, or flues with outside diameters from ½ to 5 in. and wall thicknesses from 0.055 to 0.5 in. are given on Technical Data Card No. 113 offered by Babcock & Wilcox Tube Co.

Steels in stock for immediate shipment are listed in the 1941–42 stock list prepared by Joseph T. Ryerson & Son, Inc.

Belts, hose, and packing products in a variety of types for many users, which are supplied by United States Rubber Co., are described in a recent illustrated folder.

Motor power units and motorized valves designed to operate with control instruments are described in catalog 77-1, prepared by Brown Instrument Co.

Industrial thermometers for indicating and recording temperature are described in illustrated Booklet No. 4178 offered by Motor Meter Gauge and Equipment Div., Electric Auto-Lite Co.

Centrifugal pumps in single-stage, double-suction types for a variety of services, are covered in 40-page bulletin B-6146 which gives construction features, dimensions, application data, tabular information, etc.; prepared by Allis-Chalmers Mfg. Co.

New warp compressors, said to make longer and better-weaving warps, and to increase weave room production and reduce costs, are pictured and described in Bulletin C-94, published by Davis & Furber Machine Co.

Proper lubrication and the important part it has in helping industry to fulfill defense requirements, is the subject of an illustrated leaflet prepared by Sun Oil Co.

New cotton machinery including auto-tension roll assemblies for twisters, new traverse motions for spinning and roving, an improved builder assembly for twisters, and a new Model 4 twister, are pictured and described in the April issue of *Saco-Lowell Bulletin*, published by Saco-Lowell Shops.

Leather packings in a variety of types and for many purposes are discussed in an 8-page, pocket-size booklet, prepared by J. E. Rhoads & Co.

Moisture and humidity control in textile mills by use of Airchanger systems are discussed in the May issue of *Parks' Parables*, published by Parks-Cramer Co.

Sizes and sizing of cotton yarns, detergents, worsted oil, and belts for spinning frames are among articles in the May-June issue of *The Houghton Line*, offered by E. F. Houghton & Co.

TRITON NE

—the new non-ionic, non-electrolytic, wetting and scouring agent

DISTINCTIVE Among wetting agents and detergents, the new TRITON NE is unique. It is non-electrolytic, non-ionic, and consequently does not conduct electricity. It is a chemically unique penetrating and dispersing agent in that it is a complex high molecular weight organic alcohol. It is unique physically in that it is compatible with either cation or anion active materials.

COMPATIBLE Thanks to its unique chemical and physical properties, TRITON NE is compatible with a surprising array of chemicals. TRITON NE retains its activity in acids as strong as concentrated sulfuric, salts as concentrated as 70% zinc chloride, bases such as caustic soda, and hard water salts. TRITON NE is a transparent, pale amber, viscous liquid.

ALL-PURPOSE Where unusual compatibilities are required, TRITON NE may be effectively used as a general penetrating and leveling agent. Its detergent properties make it a substitute or supplement for soap. It can be used as penetrating agent for cation active softening agents. For complete information on this entirely different wetting agent and detergent, write today.

TRITON NE FILLS OUT THIS ESTABLISHED LINE . . .

TRITON W-30 A superior wetting, penetrating, and dispersing agent — Wets rapidly and thoroughly — Anion active. Widely used as penetrating agent for dyeing, printing, desizing, kier boiling, sizing, shrinking, and finishing.

TRITON E-79 A popular emulsifying and dispersing agent. Widely employed in the textile industry as a wetting-back and yarn-conditioning agent. It has also proved to be an excellent scouring agent.

TRITON 720 A powerful detergent and scouring agent — Active in acid, neutral, or salt solutions as well as in water — Anion active. Widely used as a detergent in scouring and as a penetrating and leveling agent for use in dyeing and printing, as on pigmented taffetas to get more level dyeing.

TRITON K-60 A quaternary ammonium emulsifying and dispersing agent — Particularly active in acid solutions — Cation active. Used as softening and plasticizing agent for all types of fabrics, as mordant for many dyestuffs and resin emulsions, and as a stripping assistant.

RÖHM & HAAS COMPANY

WASHINGTON SQUARE, PHILADELPHIA, PA.

Manufacturers of Leather and Textile Specialties and Finishes . . Enzymes . . Crystal-Clear Acrylic Plastics . . Synthetic Insecticides . . Fungicides . . and other Industrial Chemicals

THIS IS NO. 28 OF A SERIES ON

GETTING THE MOST FROM WINDING

Information about winding designed to show improvements in winding equipment and new ideas in the winding operation

NEW TRAVERSE BAR LEVER WITH REPLACEABLE LOCKING POINT (No. 90 Winder)

In order to increase the life of the No. 90 Traverse Bar Lever and also to save the mill the trouble of periodically replacing the complete lever, a new design has been developed.

The Lever Lock now has a hardened steel point which, in many cases, has more than doubled the period between replacements. Since this new Locking Point is *replaceable*, it is no longer necessary to remove the rocker shaft from the winder when making a replacement.

It will be necessary to install a new Lever (90-62-16x) in order to get the advantage of the replaceable Locking Point. Once the new Lever is installed, the Locking Point can be quickly replaced at small cost and without interfering with production.

This Locking Point is made with a 15° angle in order to provide a more positive drive at high speeds. When Lever 90-62-16x takes the place of 90-62-12, the Drivers need not be changed.

An older style Lever 90-62 is made with a 25° angle. When it is replaced with the new Lever, it will also be necessary to install Driver 90-63-5 in order to have the same 15° angle on both the Locking Point and the slot in the Driver.

When making the change in one machine, 20 Levers and 10 Drivers are required. Old parts removed from the machine can be used for replacement on other winders in the room.

Left — old-style Traverse Bar Lever 90-62-12. Center — Driver 90-63-5. Right — new Traverse Bar Lever 90-62-16x with replaceable Locking Point, also shown in foreground.

WINDING 2 ENDS AT ONCE ONTO FILLING BOBBIN (No. 90 Winder)

Some mills have attempted to wind two ends of yarn from two supply packages onto a single loom bobbin, using individual tension control for each end.

This has been found to be generally unsatisfactory, due to the different diameters at which the yarn goes into the bobbin. When taking the yarn off the bobbin, one end will always be tighter than the other, and a loop will form in the slack end.

It is recommended that the two ends of yarn be wound into cones or tubes on the doubler. From such packages, the yarn can be taken through a single tension on the No. 90 winder.

If a slight amount of twist in the two ends is not objectionable, the yarn can be delivered over the end of cones. If no twist is desired, tubes can be wound for an unrolling supply.

See our General Catalog in TEXTILE YEARBOOK

"THERE'S A UNIVERSAL WINDER FOR EVERY TEXTILE NEED"

UNIVERSAL WINDING COMPANY

PROVIDENCE BOSTON PHILADELPHIA UTICA CHARLOTTE ATLANTA

*Reg. U. S. Pat. Off.

THE OVERSEERS' CORNER

HANDLING SPARE HANDS

A PETE & BILL DISCUSSION

"Bill", said Pete seriously one day, "I'm in a fix and need your advice. It's about those spare hands. They insist on coming on the floor an hour early and hanging around to 'visit' with their friends when there is no work for them."

"What's wrong with that?" inquired Bill pulling at his pipe. "I always like to have a few extra hands around. Never know when you'll need 'em."

"I don't mind either as long as they don't get in the way," replied Pete, "but the trouble is the Labor Board has gotten so tough lately that it is likely to claim that these people are doing productive jobs and cause us trouble. I'd just pass a hard and fast rule that no one could visit in the plant, but it seems a little hard on families with various members working on different shifts not to be allowed to visit occasionally with each other if they want to. They've always been permitted to do this, and if I suddenly tell them to go home they are likely to go home and stay or start looking for another job—and labor is hard enough to find nowadays anyway."

Bill began to look disgruntled. "If you take away this privilege of visiting you are going to have trouble, Pete. Labor Board or no Labor Board I'm not going to take this away from my people when they've had it all their lives."

"I'm in a fix with those spare hands"

"Well, I don't know," said Pete. "It's a hard decision. It's a question of losing some good spare hands who may be needed on defense work any day now or a question of maybe getting in trouble with the Labor Board. I can't decide what to do."

Should spare hands be allowed to linger in the mill?

Letters from Readers

Misfit Employee Fault of Overseer

"Discharging a Misfit"
Pete & Bill, May, 1941

Editor, Overseers' Corner:

Can an overseer get rid of a misfit under present-day conditions? The answer is yes. Decidedly yes. How? Let the overseer be a man who has practical rules and regulations in use at all times so that his fellow workers will know what is expected of them—or else! He can be firm and human at the same time. He should let it be known that he isn't running a training school for adolescents. An employee who has to be watched and corrected like an infant should be at home with his parents. Industry hasn't the time to coach him like a school child.

Why gripe now, Bill? Because Joe Doaks is raising hallelujah in the village. Seems like the fruit of his work would be proof enough to show you what type of person he is at home. Yes sir! He probably is more than satisfied with his job because you have let him tell you instead of your telling him.

Don't take time out to dream-up one on him. Take time to check up on yourself and let it be a lesson to you to profit by your mistake in hiring him, and not letting him know right off the bat what he would have to do if he expected to work for you. Get wise, feller, and wisdom will pay off in large dividends.

(Miss) MARTHA B. PITTINGER
Alexander City, Ala.

Don't Sell Villages

Editor, Overseers' Corner:

A mill is courting all kinds of trouble when it sells village property to every Tom, Dick and Harry; many people will not take care of their property and soon the mill will have a lot of tumble-down houses in the village with residents they cannot get rid of. I have known of some industries paying fancy prices for real estate close to their plants merely to get rid of an eyesore or undesirable businesses.

No doubt these mill villages are often a financial burden, but so long as the mill owns them it can have the say as

CONTRIBUTIONS to the letters and practical helps in "The Overseers' Corner" are paid for when published without regard to length. We use letters (not over 200 words) discussing the material on this page or any other pertinent matter whether of mechanical, managerial or just plain human interest. Those who contribute practical helps or kinks which are published (not over 500 words) will be paid additional for an appropriate sketch to illustrate their device. It is not necessary to submit finished drawings. Contributions of greater than specified length may be given consideration as articles. If these pages interest you —contribute something to them to interest others. Address Editor, Overseers' Corner, Textile World, 330 West 42nd St., New York.

to who shall live in the houses and as to how they shall be taken care of. My idea would be for the company to keep the villages under its control; and, besides, it is always a mighty good idea to let well enough alone.

K. M. S.
(*Virginia*)

Grin and Bear It

"Discharging a Misfit"
Pete & Bill, May, 1941

Editor, Overseers' Corner:

That guy Pete sure does keep his feet on the ground and his thinking faculties in working order. Of course, any thinking man will realize that he has a real problem on his hands in dealing with a misfit, but conditions being what they are today you cannot just fire him for nothing and call it quits.

As Pete so aptly says, if he should run this man off without a just cause, he would have the Labor Board and perhaps a half-dozen other Government agencies and meddlers on his neck. This seems to be one of those situations that about all you can do is to grin and bear it and hope for the best.

No overseer worthy of the name would think of framing a man to get rid of him no matter what his faults might be.

R.W.C.
(*West Virginia*)

"Distinguished Visitor" Sees Only Dressed-up Mill

(Editors' Note—In looking through our files the other day, we came across a letter written by one of our English contributors just before the war. This letter paints an eloquent picture of Britain before the Blitzkrieg—hinting unconsciously at some of the smugness which apparently pervaded the whole country down to the humblest worker. This could be written about any mill in any country which over-emphasizes surface conditions at the expense of fundamentals. We have heard nothing further from our contributor, but sincerely hope that he and his mill have been spared.)

Editor, Overseers' Corner:

Our mill, in common with many other industrial establishments in England, is now equipped with loud speakers throughout the plant, so that the worker can be instructed on taking refuge in the air raid shelters, should unhappily war be declared. During the tense days of "the crisis" we were startled by the roar of the loud speakers, bellowing over the noise of the machinery. Our startled nerves soon calmed down when the speaker announced that as we were on work of National importance, a prominent official of fame would visit the mill on the following day.

At once there was much sweeping, cleaning and garnishing. Oddments that had laid about for unknown periods were hurriedly removed. One could not help being amused at the scene as the hour approached. The women folk managed to let attractive neck-wear peep coyly above their uniform overalls, but so far as I know there is not yet any prospect of any of them becoming Lady "Blank." Sweepers with one eye on the door, ready to make a hasty retreat, brushed away at the floor that refused to give one solitary fragment of dust, while overseers nervously applied dusters everywhere.

When the distinguished visitor arrived, I am sure he must have not felt he was in a workshop but in an exposition hall. Any practical man must have realized he was not seeing the mill under normal conditions. I know from experience that there is nothing new in this "show case" type of dressing up the mill for visitors, for I have seen it done right from the Victorian era. But I do feel that visitors would be far more impressed if they saw the manufacture going on as it is all the year around.

Many employees would like the privilege of being able to have their friends and relatives visit the mill, and I have always advocated that for these there should be an "at home" day for that purpose once a year.

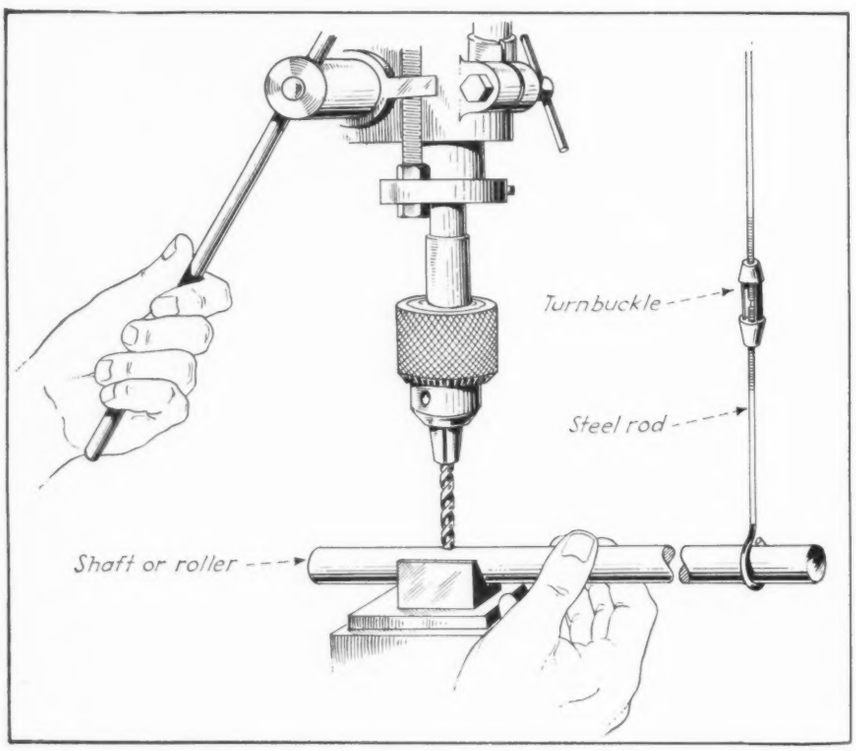
"PATERSONIAN"
London, England

Overseers' Practical Helps

Drilling Holes in Pressure Rolls

Various jobs require drilling of holes in shafting, tubing, rollers, and other long rods similar to pressure rolls. Quite often, two or three men are engaged in drilling which could be done by one man alone if he had the right equipment. A simple set-up, as shown in the illustration, allows one man to handle these difficult tasks without much trouble. Regardless of the rod length, the diameter of the holes, or where they are to be drilled through the rod, this arrangement can be rigged up in the regular working radius of any drill press. The arrangement consists of a turnbuckle connected to ⅛- to ¼-in. steel rod which is secured to an upper support at one end—the opposite end is hooked or fastened around the far end of the rod to be drilled.

The rod, pipe, etc., when placed in



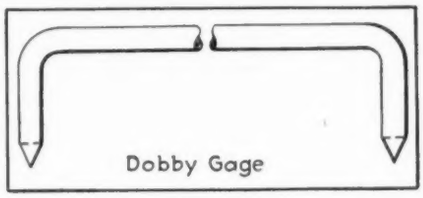
Turnbuckle support and V-block hold rolls for drilling

the V-block and then leveled by means of the turnbuckle, will be firmly held in position for drilling. This method prevents broken drills and speeds up handling.

H.E.W. (*Pennsylvania*)

Dobby Gage

Dobby knife connectors are set by many different methods—some effective, some inaccurate. Since the setting of the connectors should be the same for all looms of the same type (length of connector adjusted to pull knife ¼ in. inside hooks), a standard gage is helpful in maintaining correct adjustments. An efficient and easily made gage can



Dobby gage made from ¼-in. round steel.

be made from ¼-in. round steel with ends bent and pointed, as shown in the illustration.

When the pointed ends are placed in the oil holes of the knife and the connector bearings, the gage provides an accurate measure of length for connecting arms.

Each type of loom will require a separate gage, made in correct length.

C.S.B. (*Pennsylvania*)

Some Causes of Sloughing Off

The variety of yarns being spun today keeps the average spinner on his toes, taking care of the troubles that arise right in the spinning room. But one of the worst headaches for spinners in cloth mills, says an article in a recent issue of "The Traveler," published by Victor Ring Traveler Co., Providence, R. I., is that frequent call to the weave room to explain why the filling is sloughing off and causing imperfections in the cloth. The article goes on to say that almost every spinner could name a few of the causes of sloughing, and that the ones included in the article were discovered by one man during his long experience as overseer of spinning. An abstract of the remainder of the article follows:

When a lifting rod on a spinning frame sticks, it tends to hold the ring rail in one position momentarily, causing the yarn to build up in one spot and form a ring. This ring of yarn will frequently slough off in the shuttle on the loom.

A Pitman roll with a worn, or flat spot that causes it to hesitate will have an effect similar to a lifting rod that sticks. A chain pulley that is loose, worn, or stuck, or backlash in gearing also will cause the momentary pauses that result in rings of yarn on the quill.

The taper of the yarn must be long enough to enter the quill's first ring when the first layer of yarn is put on. The yarn entering the first ring of the quill acts as a brake to butt sloughing.

Sloughing sometimes is caused by the use of a traveler that is too light, or by filling the quill too near the top. A traveler that is too light will not maintain enough tension to bind the yarn firmly on the quill. When yarn is wound above the top ring of the quill, there is nothing to brace the yarn and it is liable to slough at this point. A lay ratio of 3 to 1 should produce a firmly wound quill of the proper build.

Wood expands and contracts in relation to the prevailing humidity, so that in a dry atmosphere the quill may shrink, causing the yarn to loosen up and subsequently slough off. Yarn that has been conditioned will soften up more with age when left too long on the quill.

If the filling frames are inspected to eliminate these faults at least once a month, there should be little sloughing trouble traceable to the spinning room; and if the spinner is successful in absolving his department from blame, he may find it advisable to look for causes for which the weave room usually is responsible. A few of the weaving causes which have been compiled by one experienced man are:

1. Too harsh a pick, or too much power on the picker stick. 2. Shuttle rebounding in the box. 3. Boxes that are too tight or too loose. 4. Quills put in battery incorrectly. 5. The action of the feeler on the filling. 6. High winds will not cause thin places in the cloth if the yarn is wound smoothly on the quills. 7. "Snotty nosed" quills will almost invariably slough off, keep them out of the looms. 8. The less handling of the quills after doffing on the spinning frames, the less chance there is for trouble from sloughing off in the looms.

THE FOURTH ANNUAL OUTING of the Middlesex Worsted Spinning Co., Lowell, Mass., will be held at Nantasket Beach, Saturday, July 26. The committee in charge includes: Norman Chadwick, chairman; Albert Sifferlen, James Robinson, Stanley Kasper, Edgar Vigeant, Stella Petkewicz, Dolly Beaulieu, Mary Longtin, Sue Chivall, Stella McNamara, Ella Denault, Rose Lanseigne, Ralph MacFadgen, David Bennett, David Costa, Roy Barnes and John Barrett.

Don't Be a Hypocrite!

Community leadership may kick back in your face, unless sincere

By HUDSON NIX

"**WHAT PART** should I take in church, civic and social affairs of the workers?" is a question often asked by conscientious superintendents, supervisors, overseers and second-hands.

"No greater part than you can accept with genuine interest and sincerity," is the answer.

This may not be a definite and clear-cut answer for every such question, but it should certainly be considered by mill leaders who take part in the community activities of the employees. This answer is especially appropriate if it is a religious or recreational activity, for you cannot conceal your feelings if you are uninterested or insincere; and no one should forget the ease with which the term "hypocrite" can be inspired. Nor the serious, though often unreasonable, attitudes it provokes.

On the other hand, the mill official who fits in naturally at church services or athletic club meetings will be welcomed sincerely and enthusiastically. He has a chance to cement good relations with those who work for him, to win their confidence, learn their thoughts, needs and reactions; he is in a position to offer valuable aid in organization problems and he can contribute to discussions the thoughts and ideas that have resulted from his training and experience. This will be genuinely appreciated, if it is offered in the right spirit. The official who takes such an interest will soon be confronted with the offer of a position of leadership in

the organization—perhaps it will be superintendent of the Sunday school, teacher, class president or adviser. Should he accept?

Not without asking himself several questions. Am I the real choice of the majority of the class or group? Have they offered me this honor as an act of courtesy or because they think I expect recognition? Did the proposal of my name before the committee stop other nominations? Did they vote for me because they felt that I might be offended if they preferred the other individual that was proposed? Will the membership respond as freely and as spontanously to group discussions and activities with me as their leader as they would if one of their position and viewpoint headed the organization? Will they feel that, since I "give the orders" through the week, I should sit back and listen to someone else on Sunday? Could I work more effectively as a member of the ranks?

Perhaps it would be well to remember the respect and enthusiasm inspired by the school principal who, during recess, is "just one of the boys." And some members of a Sunday school class or discussion group may assume the attitude: "Teacher, we're not in school today!" Too, the mill boss who practices the proper restraint in accepting community leadership, can be instrumental in helping to select for positions of leadership those who work under him who are best qualified and most influential among their fellow workers. In any working group there will be individuals who possess the capacity for leadership, and it is important that this ability finds a constructive outlet in which to assert itself.

Afer all, leadership is judged by results, and the most successful leader usually obtains results by discovering and inspiring those most capable of accomplishment and utilizing their talents in the interest and service of the group. This is as true in community organizations—Sunday schools, P.T.A., firemen's clubs, etc.—as it is in industry and Government.

Guarding Against Rowey Cloth

In woolen blend fabrics calls for close control of mixing, picking, carding

A QUESTION concerning causes of roweiness in fabrics composed of blends of virgin wool, reused wool, etc., was recently submitted by one of our readers. Because it is altogether likely that National Defense requirements will force continued and increasing use of such materials, we publish here both the original inquiry and the reply of a consultant who answered the question.

Rowey cloth may be due to several contributing causes; blend not properly laid down; separation of shoddy and heavy parts of waste from the long-fiber stock as it leaves the picker and enters the blow room; separation of stock in the automatic feed; and poor carding due to the coarseness of the wire, which is not suitable for the general run of wool and shoddy mixes, even when the long fiber is coarse.

In the mixing of wool blends which contain shoddy, noils, and waste, care must be taken to avoid any separation or lagging behind of the shoddy and other short material in the blend. When this separation takes place, it causes irregularity in the yarn and later may result in serious imperfections in the cloth such as streaky, rowey, ana cockled effects. This is more noticeable when warp and filling are of contrasting colors as in sample submitted. Using two or three shuttles at the loom will always reduce the defects but it cannot overcome them.

The separation of the short material from the long fiber can take place both in the blending and at the card. The shoddy and pieces of waste are heavier than the wool, relative to the space they occupy and, if not under proper control as it leaves the picker, the stock separates in the blow room, the wool is blown further than the shoddy and heavy pieces of waste. This may happen in spite of the most careful method of laying down a blend. As a result, at the card some portions of the lot have more shoddy than others. Poor carding will accentuate the defect and the faulty material will be found on many bobbins at the mule or ring frame.

A second cause of separation is at the card. When the stock is placed in the feed hopper, the spiked feed-apron takes the long stock more readily than the short, which has a tendency to drop back, thus increasing the percentage of shoddy and other short material as the feed gets low. If card clothing is too coarse, portions of the blend containing an excessive amount of shorts are not carded sufficiently. Coarse wire may also cause twitty yarn later.

It is our opinion your trouble is not due to weaving or spinning faults, but is being caused in the blending, picking, and carding. We offer a few suggestions which may help:

Some mills, to avoid or minimize separation, make a blend of the long staple with the shoddy, using 10% to 20% long staple and the remainder shoddy. In your case the waste and garnetted stock could be included. This blend is run through a first breaker card. This makes what is called a fleeced shoddy. The long fiber will carry the shoddy, giving better results due to less separation as the stock comes from the picker and no tendency to separate at the automatic card feed.

When laying down a blend, start with the long-fibered stock on the bottom. In tearing down, the long-fibered stock will carry the shorter stock, leaving a clean floor. A suggestion would include: bottom layer, fine A black; second layer, waste, noil, and garnett blend; third layer, carded blend of fine A black and shoddy. If oil is added when laying down blend, oil in middle of second layer, then pole. Build up pile to de-

QUESTION ON ROWEY CLOTH

Technical Editor:

I am having trouble with rowey cloth on a woolen fabric we are weaving on automatic looms. The cloth has a black filling and colored warp, and a 2 up, 2 down herringbone weave. Will you please check the inclosed samples of stock, roping, yarn, and fabric, and advise me whether this trouble is due to the carding, spinning, or some other process?

The stock is comprised of 40% fine A. black wool, 25% carbonized dark hoods, black; and 35% fine blend of yarn waste, roping, noils, and garnett. We run this stock through a Fearnaught picker twice, and once through a mixing picker. We use 1¼ parts of wool oil to 3¾ parts of water.

We are using 3-cylinder, tape condenser cards. The cards have three breakers, breast and center-draw feed. The second breaker and finisher are coupled together. And our condensers are 4-spool, single apron. The cards have 28-gage wire all the way through. The cylinder is doing 72 r.p.m. and we have tried the fancy from 400 to 525 r.p.m. The feed will not vary more than 5 grains in a pair of spools. There are no side ends sent to the spinning room, all these being taken out to prevent light ends.

We use mules for spinning. Roving from cards weighs 155 grains and is being spun into 3.8 typp (2⅜ run, 12 2/3 cut) yarn. 43 in. of roving are delivered on the mule, and there is a 29-in. stretch. The back shaft operates at 340 to 360 r.p.m., we have 17-in. rim pulleys, and are inserting 27 holes of twist. The completed yarn weighs 92 grains, and tests 72 to 76 lb.

If possible, please let me know what is likely to be the cause of this roviness. (8696)

sired height by duplicating the outlined procedure.

If blow-room of picker is not equipped with a condenser at the end of blow pipe or some other method of preventing separation, it will be advisable to obtain some such device.

Another suggestion, which may be more advantageous considering the coarseness of your card wire, would be to make a blend of the shoddy, waste, roping, and garnetted waste, and run this through the first breaker card. Now make up the blend: bottom layer, fine A black wool; second layer, noils (add oil and pole well); third layer, carded blend.

Regarding the criticism of coarseness of the wire clothing on your cards, recommendations for the general run of wool and shoddy mixes are garnett wire clothing for breast; 33 wire, first breaker; 34 wire, second breaker; 35 wire, finisher. For coarse wool and shoddy mixes, the wire is a number coarser: 32, 33, and 34. The workers, strippers, and doffers are usually clothed with the same size wire as the cylinder, but there are variations from this practice. Strippers may have wire two sizes coarser than the cylinder. The first two workers may be same wire as cylinder, and the remaining workers two sizes finer. The idea is to open the stock gradually, coarser clothing first and finer wire as the carding progresses. Too severe action in the forepart of the card will result in excessive breakage.

If you will get in touch with the makers of your cards, they will gladly advise you regarding suitable clothing and speeds for your general run of wool and shoddy mixes. Your trouble may be definitely due to poor carding.

Slashing and Weaving

Discussed at Auburn by Alabama Textile Operating Executives

MARKS ON COLORED WARPS caused by the third cylinder was the initial topic for discussion at a recent meeting of the Alabama Textile Operating Executives at Auburn, Ala. Fred F. Phillips, vice-president of Buck Creek Cotton Mill, Siluria, Ala., conducted the discussion, and a paper on "The Causes of Warp Yarn Breaks in Weaving" was presented by W. T. Shreiber of the U. S. Department of Agriculture.

Cylinder marks on colored warps are preventable by a thorough neutralizing of any chemicals by washing before the yarns reach the cylinder, it was agreed by the members present; steam pressure in cylinders, as reported from the floor, varied from 2 to 13 lb., but the consensus was that best results in slashing are obtained with cylinder temperatures of 208 to 220° F.

The amount of cloth to be wound on the calender roll at the front of the slasher should vary with the size of the yarn, it was agreed. No one present could state any rule for governing the build-up of the roll, and several expressed the idea that experience was the only guide; the feel of the warp and the amount of backlash were enumerated as the important factors to be considered. Variation which can normally be expected in size applied to warps ranged from 1 to 3 percent.

Most of the slasher men present were of the opinion that size solutions are best made by adding the starch to cold water, stirring the mixture thoroughly and bringing to a boil, then adding the other compounds. This procedure was said to give a smoother, more homogeneous solution, and one which more completely carries out its purpose on the loom. For good running work in the weave room, it was conceded that the yarn stretch at the slasher should be not over 1½% and that there should be about 7% moisture retained in the warp. Automatic control of regain was endorsed by one user who maintained that it makes a better warp and increases production of the slasher.

The first question in the weaving discussion was on the best way to check looms and handle the work of the loomfixers. Several plans were brought out: One mill has loomfixers handle only repair work and uses warp hands, in this way allotting a maximum number of looms to each fixer; another requires the loomfixer to do the entire job, but gives him a helper whom he is to train; several mills reported using both plans, and Allen Jones, of Muscogee, made a plea for more vocation training work to keep men ready for the jobs ahead.

Sloughing off of soft twisted filling can be prevented by proper adjustment of the stroke and the wind of the yarn on the bobbin, was the thought expressed most by the weavers, but it was conceded that too much power on the pick or improper adjustment of shuttle boxes often will cause filling to slough; proper conditioning of the yarn on the bobbin was pointed out as one way in which such trouble could sometimes be prevented.

Reedy cloth on light sley warps can be prevented by setting the whip roll high; in making this adjustment it may be necessary to raise the stop motion somewhat. This was suggested by one overseer who had thus remedied his defects. Various systems of checking looms were reported by loomfixers: a popular method is to have on each loom a card listing the adjustments to be made when the warp runs out, and to have the loomfixer initial the card as each adjustment is made; the second hands check at random over the room to see that the fixers have made the adjustments. Some mills reported that they use a head loomfixer who supervises the work of all other fixers.

In the discussing of the average life of shuttles, it was brought out that an important factor in the life of a shuttle is preventing switching from one loom to another. One overseer, in making a direct answer to the question as to life of shuttles said, "from one hour, to two years." One mill dresses shuttles weekly; one weaver reported an average life of 5,120 loom-hours.

In an election of officers the following were elected: Frank K. Petrea, general chairman; H. B. Bergfeld, vice chairman; Roscoe Roberts, director for 2-yr. term; Hampton Morris, director for 5-yr. term. B. H. Crawford will continue as secretary-treasurer.

Continuous Peroxide Bleaching

(*Continued from page* 72)

trolled conditions so that the cloth is heated to approximately 200° F. and is then stored for 1 hr. at this temperature in the J-box. Following this treatment the goods are washed in another cold-water washer, and then are ready for the white bins.

Labor required for the process is one operative at the caustic saturator, who also looks after the first J-box unit; a second operative who looks after the peroxide saturator and second J-box, and a third operative who divides his time between the two washers. The fact that less steam and smaller amounts of chemicals are required with the continuous process than with older methods of peroxide bleaching results in a considerable saving in costs. Production of 90 to 94% of the theoretical is obtained, based on a machine speed of 100 yd. per min. The installation at Renfrew is at present bleaching 650,000 yd. of cotton piece goods a week.

QUESTIONS & ANSWERS

Knitting Army Mufflers

Technical Editor:

Can you tell us what type and cut of machine, and what size worsted yarn, is required for making mufflers used in the Army? (8806)

These mufflers, which are covered in U. S. Army Specification No. 8-99A, have to be knitted from two ends of a 2-ply yarn on a flat knitting machine, with a 1x1 rib stitch and have a well-formed selvage edge on each side. They must conform to the following minimum requirements: width 12 in., length 64 in. Wales 6 per in., courses 11 per in. Weight of muffler, 8.5 oz.

As stated, these mufflers are made on a flat knitting machine, of approximately 8 gage. The yarn used approximates a 24/2 worsted and two ends of this yarn are used in producing the muffler. After knitting, the mufflers are brushed on both sides to produce the required napped surface.

If you plan to bid on these mufflers, you should first secure a complete copy of the specification. This can be obtained from the Philadelphia Quartermaster Depot, 21st and Johnston Sts., Philadelphia.

Finishing Veiling

Technical Editor:

We are having considerable trouble finishing fine mesh real silk veiling for hat trimming. The finished product must be free from gelatine shiners, have full gloss, have a very stiff finish and still not crack when carded. Our merchandise is made in web form and is 200 in. wide. Could you give us a formula? (8797)

It is impossible to give a definite working formula due to the fact that the type of machinery available and other plant conditions are not stated in the question. We suggest making a finish out of any of the newer resin finishes which set very stiff and yet do not crack on folding over. If these are too expensive for the particular fabric, an alternative finish would be to use a mixture of chlorinated starch, glue or gum arabic, and formaldehyde. A little sulphonated oil should be added to such a mixture to prevent cracking. Possible proportions to give a stiff but somewhat flexible finish are: 3 lb. chlorinated starch, 5 lb. glue or gum arabic, 1 qt. formaldehyde (40%), 1 pt. to 1 qt. 75% sulphonated castor oil, and water to make 50 gal. Apply at about 120° F. and dry as hot as possible.

Hot Air and Cotton Damage

Technical Editor:

Will you let us know the maximum air temperature to which a dry cotton cloth can be subjected without damage? It may be necessary to pass the cloth around some wooden or metal rollers, and we would appreciate your advising us the maximum temperature for such conditions. It is estimated that the travel of the cloth will be approximately 27 ft. per min. (8804)

There appears to be little information available regarding the subject of this question. It is generaly said that material being dried in conditioning ovens should not be heated above 240° F. However, temperatures in tenter frames run as high as 280° F. and in Schreiner calenders ordinary temperatures run around 500° F. and may go up to 700° F. Of course, tenter frames usually take a cloth with some moisture, but they often follow dry cans, so the cloth moisture content is not very high. On calenders, the speed is fairly high, but the temperature is high also.

Fixing Circular Machines

Technical Editor:

Not very long ago we saw in TEXTILE WORLD a suggestion that seamless machines be withdrawn from the line and placed in the hands of an expert fixer when they need reconditioning. This seemed to us to be the most sensible way to do that work; but we have never known it to be handled in that manner in mills in this vicinity. Usually our fixers care for so many machines that they are hard pressed for time to overhaul a machine and put it in good running condition. For this reason we should like to know how many machines in average condition, knitting plain half hose, 176 needle, transferred cuffs with reinforced heels and toes, either "Banner" or Scott & Williams, should be assigned to an average fixer who replaces all damaged needles or sinkers and does all of the repair work? (8801)

Inasmuch as 176-needle machines are coarse-gage machines producing hose of a simple construction, one fixer could probably keep up 100 machines, provided they were in first-class condition and he was not required to do repair work. On the other hand, if the machines are only in average condition, and the fixer—in addition to keeping the machines lubricated, replacing faulty sinkers and needles, etc.—has to do all the repair work, he cannot properly care for more than 60 or 70 machines at the most.

It is not good policy to keep a fixer's nose too close to the grindstone. Keeping up a section of knitting machines is one-fourth routine and three-fourths vigilance. Assigning a fixer to a section of knitting machines is, in a sense, like assigning a fire fighter to the fire department—he is what you might call reserve strength. He should be quickly available in case of trouble and should not be tied up with tedious repair jobs or overhauling.

Such jobs as straightening up a machine after a knitter has caused a smash, making major repairs, setting up patterns, and overhauling should be the duty of the head fixer. The average fixer should be free to keep his machines on the tight pulley as much as possible, and the goods flowing as uniformly and as nearly right as possible. If the plant is too small to afford a head fixer, the knitting-room foreman should be capable of making all the major repairs, overhauling, and designing.

Duplicating Knit Fabric

Technical Editor:

Inclosed herewith is a sample of fabric which I would like to duplicate on a Tompkins spring needle machine. I am inclined to believe that it was made on 14-gage needles. I shall appreciate it very much if you will lay this out on ruled paper and advise also the number of cut pressers and the amount of cuts in each. The machine I wish to make this on has 738 needles. (8812)

This particular pattern can be made on a Tompkins spring-needle machine using six feeds, alternate feeds having cut pressers. In other words, only three cut pressers are required. The pattern according to sample submitted is 38 needles wide, and the number of needles required to make it must divide by 38. Also, the cuts in the pressers would likewise have to divide by 38, such as 76, 114, etc., depending on the gage, in order that the pressers will be of a normal size. The 738 needles you wish to use would not work out well exactly to duplicate the pattern, necessitating either a change in the cylinder size, a change in the number of needles, or a change of pattern width. A herringbone similar to the sample can be worked out if you can specify the limitations of cylinder sizes you are restricted to, as well as the limitations of gages you can use.

FIXING HOSIERY MACHINES

CIRCULAR MACHINES—Chapter XI. Striper Drums and Thrust Bars

By JULIAN W. HUGHES

PATTERN DRUMS controlled by the main pattern chain are provided on most circular hosiery machines for controlling the action of the yarn-changing fingers and the auxiliary cams which produce knitting effects, or for producing mechanical shifts during the knitting cycle. The drums have circular rows of threaded holes all the way across the face for fastening the tracks of lifting cams. Motion is communicated to the fingers and auxiliary cams by thrust bars which rest on the lift cams. One arrangement of lift cams and thrust bars is shown in Fig. C20.

In addition to the main drum, which produces the mechanical shifts, such as the make-up and transfer of the welt, the rubber lay-in device, the reciprocal knitting for heel and toe pockets, etc., there is the striper drum for making changes in the main knitting yarns to effect horizontal stripes in the leg and foot of the hosiery. As mentioned in Chapter X, pattern drums are controlled by appropriate lugs on the pattern chain, which is in operation as long as the machine is running.

Because the striper drum revolves at a comparatively slow speed, and operates intermittently, it gives very little trouble; but like any mechanical contrivance, it is not fool-proof and requires a certain amount of attention and care. Sometimes the drum moves too freely, or does not move freely enough. In the latter case, the excessive friction causes undue wear on the driving mechanism. In either case, the drum gets out of time; then almost anything can happen. If the ratchet-wheels become worn, the stroke of the racking lever becomes too short to advance the drum sufficiently. A worn racking cam, or worn cam roller does the same for the stroke. A worn pawl plate, or a weak spring on the pawl plunger sometimes causes the pawl plate to slip over teeth of the ratchet wheel and fail to advance the drum.

On the inside of the striper drum there are friction shoes, somewhat like those of an automobile brake, to prevent the drum from moving of its own momentum. When the drum advances too freely and there seems to be lost motion in the racking mechanism, the friction shoes are worn and need taking up or, more likely, oil is finding its way to the inside surface of the drum and is reducing the braking efficiency of the shoes.

Although the ratchet wheel and cams on the drum do not need oiling very often, they are subject to friction and consequent wear, so some kind of lubrication must be applied occasionally. This is done best by wiping the ratchet teeth and cam faces with a piece of greasy waste. Oil applied to these parts via the oil-can route is likely to seep through screw holes, get on the shoes, and defeat the purpose of this friction-producing device. From this point of view, it is best to lubricate the drum shaft with grease or with some kind of non-running oil. And any time oil is noticed on the inside of the drum, it should be wiped out immediately.

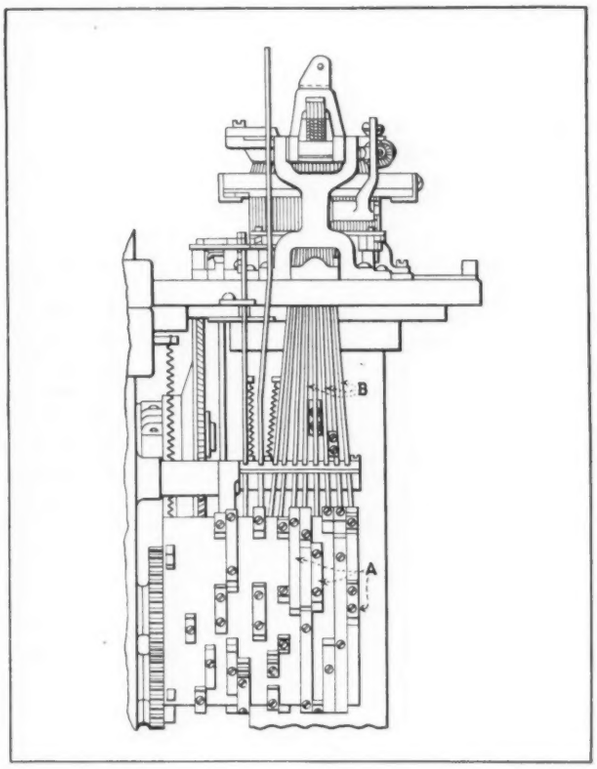


Fig. C20. Lift cams (A) and thrust bars (B)

Besides causing undue wear on the racking mechanism, excessive friction on the drum impairs the efficient operation of the machine. When a new pawl plate is required more often than seems reasonable, or when the racking cam or the cam roller seems to be wearing more rapidly than common, it is time to examine the friction. If it is found to be too tight, the shoe adjusting screws should be loosened as much as the drum movement will stand.

The stroke of the racking plunger is governed by a disk cam connected to the bevel gear which drives the cylinder. When this racking cam wears, it shortens the stroke of the plunger because the high points of the cam wear faster than the low points. In a case like this, the only remedy is to remove the cam and grind it to its proper contour. This wear can be kept to the minimum if the roller always turns freely on its stud. Usually, the stroke of the plunger can be lengthened to take care of wear by raising the plunger stud slightly on the follower arm. This widens the swing by lengthening the radius of the plunger connection.

Edges of the pawl plate tend to wear and become round from sliding over the ratchet teeth and may loose their grip on the return stroke, especially if the plunger contact spring is losing its potency. To obviate this, it is well to dress off the round edges of the plate and to examine the contact spring for correct tension. When the loop on the end of this coil spring breaks, it is better to put on a new spring because forming a new loop weakens the spring more than is commonly supposed.

Before leaving the subject of striper drums it might be well to describe briefly the chain striper brought out by Scott & Williams during the last few

years. This chain striper can be made up and applied to the machine while it is running; for instance, if the horizontal stripe arrangement on a S&W Model E5 is to be changed, it is necessary only to put on the previously made-up chain while the machine is knitting the toe or, on Model HH or PW, while the machine is knitting the top. No machine production is lost. Furthermore, the chain striper allows a wider range of patterns because the frequency of yarn changes is limited only by the length of the chain.

Briefly, the operation is as follows: a chain-reading lever rides the striper chain and is raised or lowered by chain lugs of varying height. This vertical motion of the reading lever transmits a sidewise motion to a rod which extends across the machine frame, and works through a triangular cam which forces a rocker arm against a collar on the rod. When the chain-reading lever lowers, the rod is returned to its former position by a spring. On the end of the rod is fastened the selector finger which, as it is moved right and left by a combination of levers, actuates the thrust bars individually.

FULL-FASHIONED MACHINES (Chapter IX contd) The Coulier Motion

By WALTER A. SIMOND

THE COULIER BRAKE ADJUSTMENT on recent models of Reading machines has been improved by the use of a thin square nut, *A* in Fig. F19, one side of which lies against a shoulder on the brake lever *B*. The correct method of brake adjustment is as follows:

To adjust the spring tension, loosen the ⅜-in. jamb nut, *C*, remove the spring stud *D* and the ¼-in. washer, *E*, push stud *F* toward the front of the machine far enough so the square nut *A* can be turned as required, replace the spring stud and washer, and tighten the jamb nut *C*.

To adjust the brake-band pressure on the bevel gear to compensate for wear of the brake band *J*, remove the spring stud *D*, push the stud *F* toward the front of the machine so the square nut *A* will turn freely; open the lock nut *G*, at connecting link *H*; then turn stud *I* until the desired brake pressure is obtained; tighten the lock nut *G*; and replace washer *E* and spring stud *D*.

COULIER MOTION BEVEL GEARS. The unavoidably uneven load of the Coulier motion upon the teeth of Coulier gear and pinion will cause rapid and excessive wear of these teeth unless due care is exercised in the adjustment of the Coulier motion and friction rod boxes, and by the machine operator, in care of the machine, so as to reduce the strain on the Coulier motion as much as possible. A number of necessary precautions to be taken were described in the March-April, 1934, issue of the *Reading Record*, as follows:

"On a large number of machines where the bevel gear and pinion are correctly meshed and adjusted when the machines are placed in operation, there is fast and heavy wear noted on some of the teeth of the gear. Fig. F 20 shows a bevel gear that has seen only a short period of service, and yet several of the teeth are broken off completely and many others are worn so thin that only a slight amount of force would be necessary to break them off also. Such a condition can be alleviated to a large extent by a careful study of its causes and the application of a few simple but important remedies.

"It will be noted that the worn and broken teeth appear only in two quarters of the gear, and it so happens that these quarters are the sections of the gear that are in action during the Couliering, or yarn laying, parts of the movement. The parts of the gear that are in action during the loop formation and knockover show hardly any wear at all, the teeth appearing almost as new. Therefore, it is obvious that during the Couliering movement this gear is subjected to some holding force that is extremely hard to overcome, and, as a result, the teeth on the Couliering sections show unusual wear and shortness of life. Also note that the broken teeth appear on the gear at a point where approximately one-third of the sinkers have been pushed forward, indicating that the retarding force is suddenly increased to a maximum at this point of the yarn laying stroke.

"There are four outstanding reasons for the occurrence of this trouble, and in order of their importance are: (1) friction boxes too tight; (2) gummed jack beds; (3) gummed slurcam box bar, and (4) incorrect installation of a new gear." [These will be discussed in detail in the next installment.]

Textile Machine Works

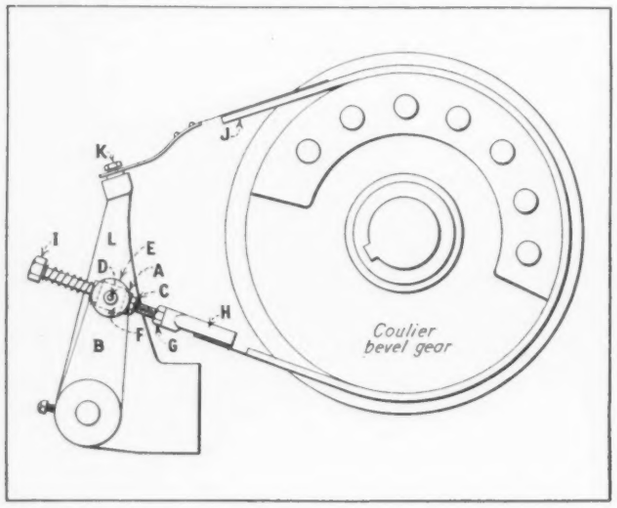


Fig. F19. Coulier motion brake adjustment

Textile Machine Works

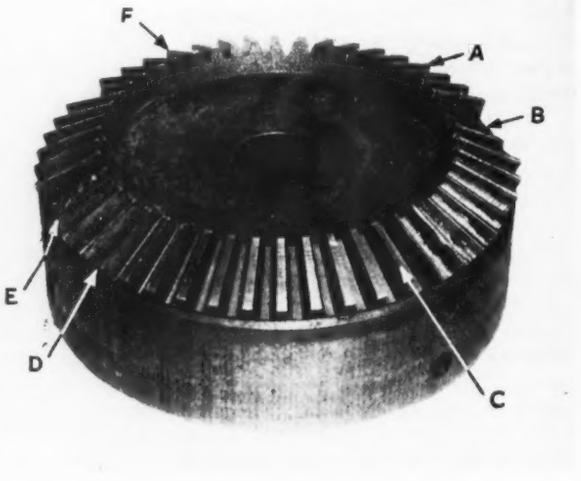


Fig. F20. Badly worn bevel gear

COTTON SECTION—Chapter XVI—Continued

By IVAR MOBERG

Box Multipliers

TO BUILD A CHAIN for a Crompton & Knowles four-chain multiplier, taking full advantage of its chain bars saving features, first make a layout of the color system. For purposes of illustration assume a color system of a blanket, as follows:

	Picks	Color	Box	Chain bars		
Margin:	210	white	1st	14	17	13
Border:	48	green	3rd	3	2	1
	8	black	4th	4	4	4
	24	green	3rd	5	1	12
	8	black	4th	4	4	4
	48	brown	2nd	3	2	1
	16	white	1st	1	8	8
	48	brown	2nd	3	2	1
	8	black	4th	4	4	4
	24	green	3rd	5	1	12
	8	black	4th	4	4	4
	48	green	3rd	3	2	1
Body: 5x	102	white	1st	90	50	50
	102	brown	2nd			
	102	white	1st	9	5	5
Border:	48	green	3rd	3	2	1
	8	black	4th	4	4	4
	24	green	3rd	5	1	12
	8	black	4th	4	4	4
	48	brown	2nd	3	2	1
	16	white	1st	1	8	8
	48	brown	2nd	3	2	1
	8	black	4th	4	4	4
	24	green	3rd	5	1	12
	8	black	4th	4	4	4
	48	green	3rd	3	2	1
	1,908			191	140	172

In laying out the color system first determine the various portions of the blanket, then the picks of each color, and the colors themselves. Next, arrange the boxes for each color, taking care to avoid as much as possible skipping or jumping of boxes. A box change of from 1st to 4th or from 4th to 1st should be avoided, especially the latter. This is because the fast movement of the boxes makes it difficult to get them settled down before the pick, and a bad pick is likely to follow a change.

After the boxes have been properly arranged for the colors, determine the best multiplying integer for the body chain and for the border chain. The multiplying integer may be the same, or different, for the two chains; but if it is not the same, one must be a multiple of the other.

By inspection it will be noted that in the example under consideration the integer 8 is the greatest common divisor into the number of picks in the border portion. Hence 8, or a multiple of 8, would be used in multiplying on the border chain. Further inspection shows that there are more picks over a multiple of 8, than below. Therefore, in the present case, 16, 24, and 48 as multiplying integers can be compared, as indicated in the columns at the right of the box numbers on the layout. The figures in the three columns represent the number of chain bars required for each color section, using integers 16, 24, and 48 respectively. The number of bars is calculated by dividing the picks of each color by the integer, and adding one bar for each two picks remaining.

For example, the first color section in the border portion is 48 picks of green. This will require three chain bars using 16 as a multiplying integer, two bars using 24, or one bar using 48. The next color section is 8 picks of black. As this number is less than the lowest multiplying integer, no multiplying is possible and four single bars, each representing two picks, must be used. The third color section calls for 24 picks of green. Using 16, this would require 1 + 4, or 5 bars; using 24, one bar; using 48, 12 bars representing 2 picks each.

In similar manner, determine the number of chain bars for each color section in any one of the border portions, and add up the number of chain bars from each multiplying integer. In the present case it will be found that the 16 multiplying integer requires 39 bars, the 24 integer 34 bars, and the 48 integer 52 bars of chain. Obviously, the 24 integer is the most advantageous multiplier for this border.

By inspection of the body portion, which calls for 102 picks of each of two color sections, the multiplying integer is determined. As this must be the same as, or a multiple of, the border integer, 24, 48, and 96 may be considered. It is apparent that use of 96 would require the least number of chain bars for the body portion, but as this would necessitate a rather long multiplier chain, the integer 48 would probably be more suitable.

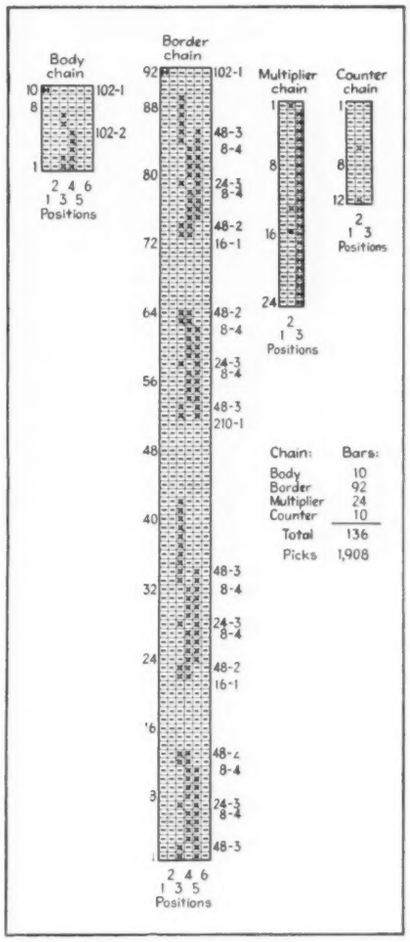


Fig. C95. One method of laying out chains for pattern described in text

THERE ARE TWO METHODS by which the chains can be built. One, as shown at Fig. C95, is to build the body chain for one color repeat, 102 picks white and 102 picks brown, using the integer 48 as a multiplier. This would require only 10 bars for the body portion, as the counter chain would be built to permit the chain to go around five times before the border chain would be called into action. This would be satisfactory as far as the body chain is concerned. However, it would make necessary building the border chain to take care of the first body stripe, the first border, the margin, and the second border. This would make the border chain 92 bars in length (7 + 34 + 17 + 34 = 92) which would be rather long.

(*To be continued.*—Editor)

LOOMFIXERS' MANUAL

RAYON AND SILK SECTION—Chapter V—Continued

By H. E. WENRICH

The Lay Motion

THE ROCKER SHAFT and its adjustment and correct operation were topics of the last installment (May, page 117) and a discussion was begun of methods of removing the free bearing from inside the loom frame on plain-bearing looms. Should the shaft be difficult to move after releasing all the castings secured to it, tighten up one lay-sword support, preferably in the center of the shaft, and tap it with a hammer. A few sharp blows will generally move the most stubborn rocker shaft.

After the shaft has been removed, take off all castings remaining on it, and place them on the new shaft in exactly the same positions in which they were on the old shaft. Fit new bearings on to the new shaft as explained previously, placing the bearings in their proper positions to make sure they are sufficiently free to work smoothly.

After this, slide them back upon the shaft in order to place the shaft in position. Replace the shaft by sliding it in the way it was removed. After the shaft is in position, slide the bearings into the bearing supports and insert the bolts, but do not tighten them as yet.

Replace all castings that were removed and tighten them in proper position. Tighten lay-sword supports and shoes. After all other adjustments have been made on these castings, draw the bearing bolts tight.

It may become necessary to readjust the center filling-stop-motion, as well as the take-up motion. Inspect the protector-rod dagger points to make certain they strike in the right position. After all adjustments have been made, be sure to oil well where needed.

PLAIN-SIDE SHUTTLE BOXES seem to be the exception to the rule, previously pointed out, that many parts can be similarly adjusted on every loom in the mill. Plain-side shuttle boxes, on looms such as 1x1, 2x1, etc., and disregarding quill- and shuttle-changing types, are of so many different types and require such a variety of methods of fixing, that loomfixers must in the majority of instances just use their own judgment and get the work done and the loom running again in the shortest time possible for a neat and satisfactory repair. However, novice and experienced loomfixers alike will find the suggestions contained in this and succeeding installments to be of value in getting many a puzzling job well done.

Fig. RS29 is a schematic view in which several different repairs are illustrated. This sketch is of the back binder type of plain-side shuttle box, but the repairs apply equally as well regardless of whether the loom is of the front or back binder type.

The box back holds the box binder by means of a steel pin. If the holes through which this pin passes becomes enlarged, heavier pins can be inserted to make a snug fit. When placing in heavier pins, the hole in the box binder must likewise be enlarged to assure a correct fit.

An excellent method of attaching straps to the lay is by use of a stud bolt fastened to a small steel plate about 2½x1½ in. in size. As will be seen on reference to the illustration, this plate is held in position by a bolt which has been countersunk in the top of the lay beneath the bottom box-plate. The end view further clarifies this repair. Short bolts can be used in place of stud bolts by recessing bolt heads.

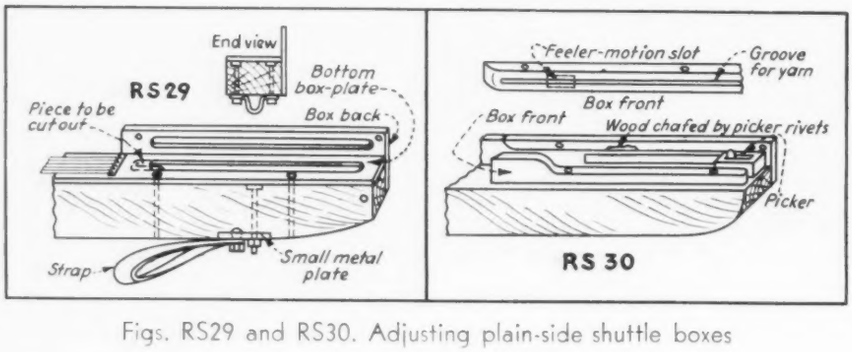
When bottom box-plates wear down in the center, they cause erratic shuttle flight. These plates should be kept in good repair at all times. If plates crack, they can be filed out with a fine file, and filled in with wood filler. Sealing wax can also be used for this purpose.

The box top or top shuttle-guide shown in Fig. RS30 should be so adjusted that it is just slightly above the shuttle, to prevent binding. The chief purpose of this guide is correctly to position the shuttle point into the picker, and to line it up in the box so that when the pick starts the shuttle's flight across the raceplate will be true. It is a good precaution on new box tops to file out the hole at each end, as otherwise when the adjusting bolts are tightened the wood might split at the back end. A shoemaker's round rasp makes an excellent addition to the loomfixer's tool kit and works well for enlarging wood or leather holes.

With some pickers used in connection with flat and large-size quills the rivets in the picker tend to chafe the wood in the box tops, as illustrated, causing them to wear out prematurely. Fiber strips placed along the bottom of the box tops will help prevent such damage.

Box fronts of the type shown at the top of Fig. RS30 have a narrow lengthwise groove on the inside, halfway from top to bottom, to prevent pinching of yarn between shuttle and box-front face. When this groove wears down, it can be cut deeper into the wood. After such cutting, the face should be sanded and polished. For looms having shuttles equipped with low tension devices, the groove should be somewhat lower than ordinarily. Feeler motion slots must also be sanded to eliminate ragged edges.

Box fronts of the type shown in the main portion of Fig. RS30 are used in some mills to avoid box stains resulting from trapped filling. The height of the opening end is to prevent shuttles flying out just before entering the box. The opening of box fronts should be at least ⅛ in. wider than the other end of the box. This allows shuttles sufficient space to enter properly even if they are slightly out of alignment on their flight across the raceplate. Box fronts also position entering shuttles. The back end of the box front should be set to allow just the exact clearance to receive the shuttle as it comes to rest.



Figs. RS29 and RS30. Adjusting plain-side shuttle boxes

STAPLE COTTON FABRICS

By JOHN HOYE
Fabric Technician with W. Harris Thurston, New York

This sixty-first installment of Mr. Hoye's series of articles—which began in the January, 1936, issue—discusses oilcloth and plissé shade cloth.

OILCLOTHS are oil-coated fabrics with a waterproof dull or glossy finish, in solid colors and printed decorative designs; they are pliable, and are cleaned easily with soap and water. Several constructions of sheetings, usually of low thread count, are used as bases. In the coating of these fabrics various vegetable oils, china clay, and colored pigments are used. Before coating, the fabric sometimes is dyed a solid color; it may be printed on the back before the coating is completed. Unbleached cloths also are used and usually are decorated by printing with quick-drying lacquer. Solid-color effects generally are used with embossed finishes; the fabrics usually are given four coats and finished flat or gloss.

In some cases the cloth is napped on the back for bulk and softness. The napped back acts as a cushion and protection for polished table tops and also as a silence cloth for metal top tables.

A black oilcloth called "enamelled," or "leather" cloth is made to resemble black patent leather and has wide use in belts, handbags, and shoes. It is treated with oil or a combination of pyroxylin and oil. Drills and warp sateens are used as a base and are first put thru a piece-dyeing process.

Wall canvas oilcloths are used largely for the covering and decoration of walls and ceilings of homes and offices. They are made in many printed decorative patterns and solid colors, and in embossed and textured effects; they are practical to use, being very durable and easily cleaned. Wall canvas, besides being decorative, protects the plaster from chipping and covers up cracks. It is economical in that it can easily be painted over.

Other uses for colored and printed oilcloth are as table and shelf covers, window shades, kitchen drapes, table and seat pads, and upholstered furniture.

The following sheeting constructions are those most commonly used as bases for oilcloth: 46½ in., 40x38, 6.15 yd. per lb.; 46 in., 44x48, 5.00 yd. per lb.; 50½ in., 44x40, 5.50 yd. per lb.; 61 in., 44x48, 3.00 yd. per lb.

Oil-treated clothing fabrics are used for waterproof garments, such as slickers, saddle coats, ponchos, trousers, fishermen's suits, utility aprons, and sou'wester hats. These are light-weight roomy garments usually worn in stormy weather by boatmen, railroadmen, motormen, policemen, construction men, and others.

A heavy treatment on one side with oxidized pure linseed oil seals the fabric, making it waterproof. Fabrics also are treated on both sides for use in aprons and similar garments. The base fabrics used include print cloths, sheetings, and lawns which before coating usually are dyed in colors such as yellow, olive drab, or black. Combed lawns used as base fabrics are carefully selected and must be free from holes, heavy slubs, and other defects which will affect waterproofness.

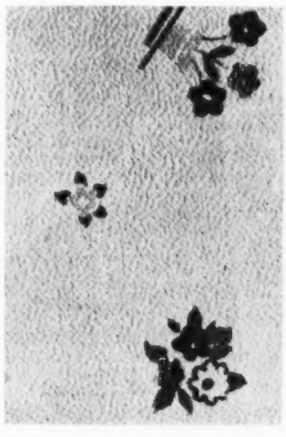
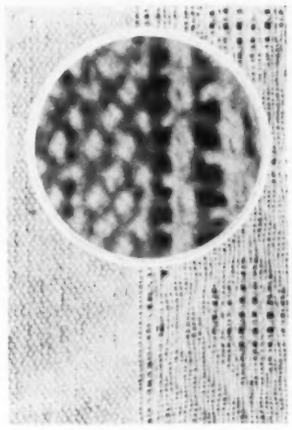


Illustration of different types of oilcloth made from same gray fabric. At left is embossed flat finish, and at right is high-gloss varnish finish on a 4-color printed floral design; base cloth is plain woven, 50½ in., 40x38, 6.15 yd. per lb.



Austrian plissé shade cloth—38 in., 102x36 overall, 3.46 yd. per lb., combed yarns

The most commonly used base cloths are: 40-in. combed lawn, 96x100, 7.00 yd. per lb.; 36-in. sheeting, 64x68, 3.50 yd. per lb.; 40-in. sheeting, 64-68, 3.15 yd. per lb.; and 39-in. print cloth, 80x80, 4.00 yd. per lb.

AUSTRIAN PLISSE-STRIPE shade cloth differs from regular shade cloths by having woven seersucker stripes and no coating or filling. The seersucker or plissé stripes are about 1 in. wide; the stripe effects are obtained by weaving alternate sections of plain-woven low-tension warp and normal-tension figured warp. There is a longer length of yarn in the plain-woven stripe than there is in the figured stripe, causing the former to crinkle, or pucker up. Austrian shade cloth is made with all-cotton warp and filling; and with cotton plissé stripes, figured rayon stripes, and rayon filling. Carded single, or ply combed cotton yarns, plain or mercerized, are used. These shade cloths, which are washable, generally are used in the undyed state, ecru, and often are pre-shrunk. Besides being used for shades they also are used for matching bedspreads and drapes.

Examples of Austrian shade cloth:

36 in., 118x48 overall, 2.83 yd. per lb., 70 ends per in. of carded cotton yarn in plissé stripe, 48 ends per in. of filament rayon in figured stripe. 38 in., 102x36 overall, 3.46 yd. per lb., all yarns are 2-ply combed cotton. 38 in., 98x34 overall, 2.14 yd. per lb., spun rayon filling, mercerized 2-ply combed cotton warp.

The range of carded yarns generally used is from 16s to 18s; combed yarns most commonly employed are 22/2, 30/2, and 35/2. The most usual rayon yarns are 300 denier continuous filament and 13/2 spun.

NEWS OF THE MONTH

Immense Cotton-Textile Production Is 20% for Defense

Cotton-textile production this year is running at an annual rate well above 11,000,000,000 sq yds, the greatest production in the history of the industry, according to estimates which have been made by the Industry Committee of the Association of Cotton Textile Merchants of New York, of which Gerrish H. Milliken is chairman. Previous high records were 9,593,557,000 in 1940 and 9,445,914,000 in 1937.

The industry's efforts to meet the demand of the Defense Program have been an important factor in the increase in cotton-textile production in the last year, Mr. Milliken stated. It is estimated that directly and indirectly more than 20% of present production will go into the National Defense effort.

Cotton consumption is also at new high levels, and it is estimated that more than 10,000,000 bales will be consumed this year, as compared with a normal average of 6,500,000 to 7,000,000.

Department of Commerce figures show plainly the result of the pressure upon the industry to meet defense demands. Taking full operation of all existing spindles 80 hours per week as rated 100% capacity, these figures indicate that in May, 1941, the industry was operating at 121.8%, as against 89.4% in May, 1940, and 81.4% in May, 1939.

Last month the industry reported 1,372,000 idle spindles, the smallest number in the history of the Department of Commerce figures. It compares with 3,670,000 in May, 1939. A recent State-by-State survey indicates that practically all of the inactive spindles are in partially dismantled mills or mills recently in liquidation.

Learner Rates Unchanged

Learner certificates outstanding in the cotton textile industry at 25¢ per hour are uneffected by the rise in minimum for regular workers from 32½¢ to 37½¢ according to an exchange of telegrams between Russell T. Fisher, president of NACM and the Wage and Hour Division at Washington. Also new certificates will be issued at the same rate of 25¢. Hearing on the 40¢ minimum for knitted underwear was postponed from July 9 to Sept. 15.

Power Shortage Acute in Southeast

Power consumption by Georgia and Alabama textile mills has been curtailed by one-third during week days because of an acute rainfall shortage and extra demands made on the power companies by defense industries. The entire Southeast has been affected, but at this writing no further curtailment has been put into effect.

In Georgia, textile mills have freed more than 1,000,000 kw. daily for defense industry consumption, according to T. M. Forbes, secretary of the State cotton manufacturers' association.

Part of the lost time is made up by operating on Saturdays and Sundays when the load is less and extra electric power is available. Mills with facilities for manufacturing their own power are putting all equipment into operation. It is reported that some of the cotton mills in Augusta, Ga., are utilizing tractors to generate additional power.

Wage-hour officials in the South have ruled that employees working on Saturday and Sunday during the power shortage are not entitled to overtime pay if they do not exceed the 40 hr. week.

It is not anticipated that market conditions are likely to be affected to any extent by the enforced curtailment. Recent rains have raised reservoir levels in Georgia but more and heavier rains are needed.

Throughout the South efforts are being made to conserve electric energy in various ways, such as by reducing show window illumination and street lighting, but consensus is that any real curtailment must be made by industry.

Rayon Finishers Approve Trade-Practice Rules

Proposed fair-trade-practice rules for the rayon and silk dyeing, printing, and finishing industry were unanimously approved by the representatives of the industry at a hearing held June 26, at the offices of the Federal Trade Commission, Washington, D. C. These rules, which are intended to eliminate unfair competition and other harmful practices, cover the following points: selling below cost; misbranding of merchandise; misrepresentation of products; substitution of products; imitation of trademarks; defamation of competitors; disparagement of products of competitors; commercial bribery; procurement of competitors' confidential information by unfair means and wrongful use thereof; inducing breach of contract; unlawful interference; unfair threats of infringement suits; coercing purchase of one product as prerequisite to purchase of other products; bogus independents; false and misleading price quotations; false invoicing; special services; redyeing; allowances after materials are cut; repudiating contracts; maintenance of accurate records, price lists, credit information; settlement of disputes; and adjustment of claims.

Hosiery Union to Pay $110,000 Damages

The out-of-court negotiations between Apex Hosiery Co., Philadelphia, and Branch 1 of the American Federation of Hosiery Workers and the city of Philadelphia, relating to damages sustained by the Apex company in the sit-down strike of May 1937, were concluded last month with an agreement by the union to pay $110,000 over a 32-month period.

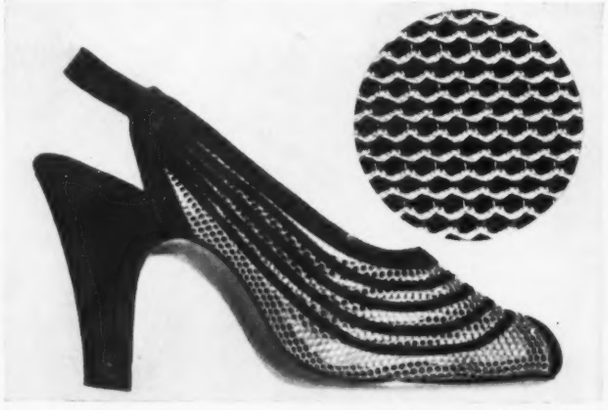


Photo courtesy Town & Country

VINYON IN SHOES is one of the newer uses of American Viscose Corp's. synthetic yarn. Above shoe incorporates warp-knit fabric shown full size in insert. After knitting, Vinyon fabric is fused by heat treatment; this is said to assure retention of rigidity, prevent its becoming soft or going out of shape when wet.

"SLEEPY HEAD"—First Prize of $50 in the Pequot "Sleeping Beauty" Photographic Contest was awarded to Mrs. Walter A. Anderson, Two Harbors, Minn., for the above. Over 500 photographs were submitted to Pequot Mills and 18 prizes were awarded.

The down-payment of $30,000 has been paid and the monthly installments amount to $2,500 each. The city of Philadelphia settled for the sum of $15,000 the claim against it for damages for failure to provide adequate police protection.

The litigation preceding this settlement has been in Federal and State Courts for nearly four years. It is understood that the union will pay out of its regular income and no special assessments will be placed on the workers. It is understood that the amount agreed upon is one of the largest paid out in damages by an individual union in labor history.

Rayon Finishers Agree to 75c. Minimum Wage

Wage rates in the rayon dyeing and finishing industry in the Paterson, N. J., and metropolitan New York areas were increased to a minimum of 75c. an hour, as a result of an agreement signed last month by employers and the Federation of Dyers, Finishers, Printers, and Bleachers of America. The pact affects 16,000 workers. Because of this increase of 9c. an hour in minimum wage rates, together with rising costs of materials, dyeing companies have advanced prices 1c. a yard on practically all types of fabrics.

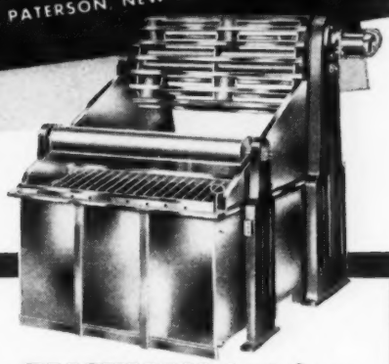
37½c. Minimum Wage Now in Effect

The 37½¢ minimum wage for the part of the textile industry covered by Committee No. 1 unanimously recommended by the industry committee, went into effect June 30, by order of Gen. Philip Fleming, Wage-Hour Administrator. Pay of the lowest scale workers, at standard 40 hours a week, was raised from $13 to $15. The pay of 300,000 persons was affected. This is the largest number ever to receive increases as a result of a wage order. Quick agreement on the com-

MONEY BACK

"We relined four wooden dye boxes with Stainless Steel—and more than got our money back in one season."

COMMERCIAL PIECE DYEING COMPANY
PATERSON, NEW JERSEY



Here's How BLICKMAN Stainless Steel Linings Boost *Your Profits*

You save up to 20% in heating, also eliminate entirely the extra cost of stripping. You use less water and do away with spotting and streaking. You get five loads a day per box instead of three—increase your production 40%. The experience of Commercial Piece Dyeing Company proves that modernizing with Blickman Stainless Steel dye box linings *costs you nothing.*

***Exclusive* BLICKMAN Features**

1. Fully rounded corners for easy cleaning.
2. Crevice-free surfaces to eliminate false shades and streaking.
3. Flexibility—use the same dye box for both dark and pastel colors—by a quick rinse of the box.
4. No need to leave water in the box over night.

Free We will be glad to have our engineers study your plant and show you, *with no obligation on your part,* how you can get the benefits of Blickman Stainless Steel linings for your wooden dye boxes *without interruption of your present production.*

S. BLICKMAN, INC.
407 GREGORY AVE., WEEHAWKEN, N. J.
MANUFACTURERS OF STAINLESS STEEL DYEING EQUIPMENT
EST 1889

"If time is short—speed the stroke"— ancient words, thinly paraphrased to fit this moiling age in which strength and preparation for defense springs from the tools of the Engineer.

But speed comes to the stroke—whether of pen or pile driver—through the exercise of skills, ingenuity and direction which Time culminates into the vitalized experience of a balanced Engineering organization.

This kind of Engineering experience—seasoned and alert—is your best guarantee of speed for production *now* and adaptability to conversion in the future.

J. E. SIRRINE & COMPANY
GREENVILLE SOUTH CAROLINA

Engineers for 40 years

INDUSTRIAL PLANTS · PLANS AND DESIGNS · POWER
LOCATION STUDIES · WATER SUPPLY AND TREATMENT

mittee recommendation was reached because management wanted the inevitable new rate set as a basis for figuring on Government contracts.

Outside of the committee's recommendations, Gen. Fleming, at the required public hearing prior to his order, asked for evidence as to what provision in his order might be necessary to prevent circumvention of the minimum wage by raising rents on company houses and prices in company stores. No provision was made in the June 30 order, but it will be made later after hearings, probably in textile centers.

A public hearing on the 40-cent minimum wage recommended by an industry committee for the Knitted and Men's Woven Underwear and Commercial Knitting Industry was scheduled for July 9 at the Labor Department, Washington.

S. C. Low Country Bidding for Mills

A bid for cotton mills and textile plants is being made by civic leaders of Charleston and other cities and towns in the coastal area of South Carolina in anticipation of the availability of cheap electrical power upon the completion of the $50,000,000 Santee-Cooper power project early next winter, according to Hamilton M. Wright who recently made an industrial survey of the section.

Attention was called to the fact that the 1940 census reveals that over 310,000 bales of cotton were ginned in the twenty counties embracing the coastal plain of South Carolina, and that there is not a single cotton mill in operation south of an imaginary line extending from Augusta, Ga., through Bamberg, Orangeburg, Sumter, Florence, Dillon, and on to Lumberton in North Carolina. The coastal plain of the Southeastern States, needs industries, and South Carolina will have an operating energy available annually of 700,000,000 kw. of electric current soon, it is claimed. The 20 counties had a population of 943,977 in 1940, a gain of 17,231 over the previous decade.

Sir Kenneth Lee in Trade Post Here

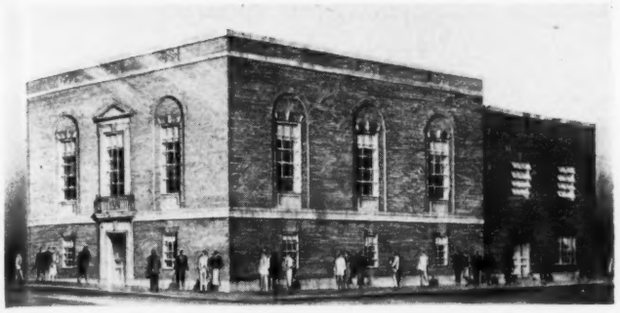
Sir Kenneth Lee

Sir Kenneth Lee, who relinquished the chairmanship of the board of the Tootal, Broadhurst Lee Co., Ltd., world-known manufacturers of cotton goods, in Manchester, England, at the outbreak of hostilities in September, 1939, to re-enter Government Service, has been appointed representative in the United States of the Industrial and Export Council of the British Board of Trade. His function will be to coordinate and stimulate efforts being made in the United Kingdom and the United States to maintain the fullest possible volume of export trade from Great Britain to this country. He is making his headquarters in New York in offices adjacent to those of the British Empire Chamber of Commerce, 587 Fifth Avenue.

He Seems to Like It

This is what Carroll L. Wilson, director of the Bureau of Foreign and Domestic Commerce, wrote to Edward T. Pickard, secretary of the Textile Foundation and of the U.S. Institute for Textile Research:

"I want to congratulate you and the writers of the report



MERCHANTS CLUB, New York, will erect the building sketched above at the southeast corner of Thomas Street and Trimble Place. The site has been leased for 21 years from the Society of the New York Hospital. Plans and specifications have been prepared by Cross & Cross, architects, and Carl Jensen, associate. Completion is scheduled on Nov. 1. The Club hopes to take possession during the Christmas holidays. William E. Winchester of Deering Milliken & Co. is president of the Club, and Leavelle McCampbell of McCampbell & Co., is vice-president.

on denim. When this came in, I dropped everything else and read it from cover to cover. As you can well understand, this is one of the most interesting documents that I have seen in a long time. It goes farther to explain the philosophy, the aims, and the possibilities that I visualize in the field of current data as an aid to business policy, than anything else I have seen. It is going to be made required reading for every analyst in this Bureau. How can I get a supply of copies (50 or 100) of the report quickly?"

Anyone who knows what it means for a Government department to order 50 to 100 copies of a publication will realize that Mr. Wilson really likes this one.

As his letter may raise the curiosity of our readers, we hasten to add that the report referred to is "What to Do About Denim Stocks," the first of a series of seven studies of "Inventory Policies in the Textile Industry," conducted by the Wharton School and published by the Textile Foundation, Industrial Building, Bureau of Standards, Washington, D.C., whence they may be secured at 50¢ per copy or $3.00 for the complete set.

Woolknit Presents Fall Fashions

Fall styles in knit outerwear were presented to the trade and press by Woolknit Associates at a recent style show held at the Ritz-Carlton Hotel, New York. The show comprised offerings of leading manufacturers of knit outerwear for sports and formal wear. The following fabric types were prominent: plaids, horizontal, vertical, and diagonal stripes, simulated cheviots, jerseys, and fabrics that look like worsteds and tweeds. From a distance of a few feet it was impossible to recognize some of the fabrics as knitted.

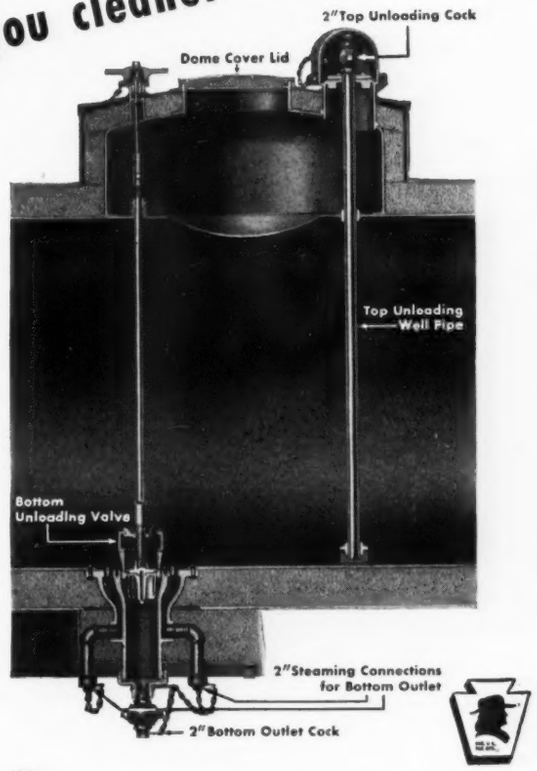
Shortage in Certain Types of Cotton

Because of Government demands for high-quality, long-staple cotton, such as the higher grades of Pima, and because of curtailment of Egyptian imports, there has developed an acute shortage of cotton of this type. For some purposes, substitutes, such as Nylon and the high-strength rayons, are being specified, particularly in the aeronautical field.

So far as the ordinary grade and staple of cotton is concerned, there is available the largest supply of "free" cotton in several years. Aside from the Pima situation the only shortages noticed to date are in staples of 1⅜ and 1¼ in. middling and above.

Outlook for the new crop is uncertain at present because of excessive rains in Texas and the West, necessitating three

NEW TANK CARS
cut handling costs and bring you cleaner caustic soda



THE new caustic soda tank car fleet just put in service by Pennsylvania Salt Manufacturing Company will bring you a purer product and also reduce your handling costs.

CLEANER CAUSTIC SODA—because of the protective lining, the special draining plates, and the use of caustic resistant valves and interior fittings. Steam heating coils do not contact caustic soda, thus eliminating contamination from this source.

QUICKER HANDLING—because ample insulation assures delivery of *fluid* caustic in any weather. The improved design and more accessible unloading connections also help to speed unloading.

EASIER, SAFER UNLOADING—because the number of unloading fittings have been minimized and these are easily operated. Also, for your workmen's safety, each car is equipped with a dome safety platform and guard railing.

Write today for full information on the safe handling of liquid caustic soda delivered in these new cars. Pennsylvania Salt Manufacturing Company, Widener Bldg., Philadelphia, Pa.—New York • Chicago • St. Louis • Pittsburgh • Tacoma • Wyandotte.

PENNSYLVANIA SALT
MANUFACTURING COMPANY
Chemicals

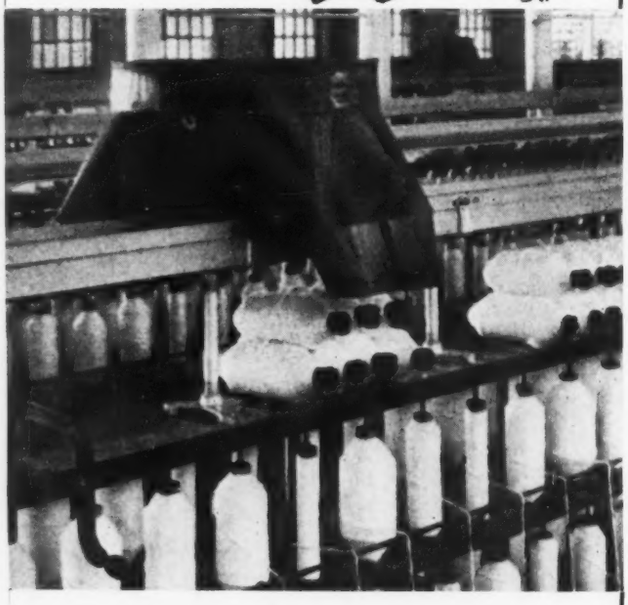
Spinner to Erector . .

"With those Traveling Cleaners all set up and running, it looks like we spinners will get a coupla more sides to tend."

Erector to Spinner . .

"Most likely. Often turns out that way. But look at that section of clean frames over there where we have got 'em running.

"Allowing for two more sides—instead of being harder wouldn't you figure the spinner's job looked easier?"



Parks-Cramer Company

Fitchburg, Mass. Boston, Mass. Charlotte, N. C.

TEXTILE CALENDAR

American Association of Textile Technologists, annual outing. Sands Point Bath Club, Port Washington, N. Y., July 25, 1941.

American Association of Textile Chemists & Colorists, annual meeting and convention, Carolina Hotel, Pinehurst, N. C., Oct. 31, and Nov. 1, 1941.

to four plantings in some instances, and spotty conditions in the East. Total acreage is about the same as last year, which produced a 12,000,000 bale crop, but conditions are not nearly so good at this writing. At least 1,000,000 additional acres have been planted in Pima this year.

Authoritative but unofficial forecasts have been made that parity on Aug. 1 would be 16.37 c., which indicates the farmer can expect good prices this fall.

Delta Crop Outlook

At this particular point it is difficult to forecast the Delta crop supply in relation to possible mill demands. Approximately one million acres were planted and although a good working season has prevailed, the Delta has had practically no rain for two months and at least 40% of the crop now shows effects of the drought. One of the heaviest boll-weevil infestations in several years is reported from all sections of the Delta. With these factors in mind there is some feeling that the baleage produced may be somewhat lower than the 800,000 anticipated.

It is estimated that fully 50% of the Delta acreage was planted this year in seed which will yield $1\frac{5}{32}$" and $1\frac{3}{16}$" staple. This is the biggest switch from one staple to another the Delta has known in a single season and it was made in anticipation of Government requirements for defense needs. The remaining 50% of the Delta is planted in $1\frac{1}{32}$" to $1\frac{3}{32}$" mostly, with $1\frac{1}{8}$" and $1\frac{1}{4}$" and longer sharing the minimum acreage. These planting proportions are more in line with those of 1936 than any year since that time.

Practically all the 1938 Delta loan cotton has been repossessed and sold. On June 1 only 192,317 bales of free cotton were in storage in Delta warehouses, with weekly shipments averaging over 50,000 bales.

Although it is believed that mills are well supplied with Delta cotton for the balance of this season they will certainly be completely dependent on this year's crop for 1941–42 needs. And their present rate of consumption has reached an unprecedented high.

Amoskeag Mfg. Co. Final Liquidation

Amoskeag Mfg. Co., Manchester, N. H., officially wound up its affairs on June 16, when shareholders voted a final dividend of 70.4¢ a share on the 365,977 shares outstanding. F. C. Dumaine, treasurer, was authorized to take the necessary steps for liquidation, which must be completed by Dec. 31 of this year. Amoskeag Mfg. Co. at one time employed 17,000 people. After the company went into bankruptcy, five or six years ago, the property was purchased by Amoskeag Industries, Inc. At present there are over 70 companies located in the Amoskeag mills, and these companies employ approximately 6,500 workers.

Cotton Research Congress

Speakers representing all phases of the cotton problem were on the program of the second annual Cotton Research Congress held at Waco, Texas, June 26–28. Among those allied with the textile industry were Claudius T. Murchison, president of the Cotton-Textile Institute; Walter Dillard,

vice-president and manager of New Braunfels (Tex.) Textile Mills; B. S. Zalkind, Saco-Lowell Shops, Biddeford, Me. The chief sponsoring agency of the Congress was the Statewide Cotton Committee of Texas, of which Burris C. Jackson is general chairman. Dr. A. B. Conner, director of the Texas Experiment Station, College Station, was chairman of the Congress program committee.

New Coating Process for Cottons and Rayons

Development of a new coating process for cotton and rayon fabrics has been announced recently by M. Wyle Co., 267 Fifth Ave., New York. This process, which is known as Mello-Sheen, is being applied to a variety of fabrics to render them waterproof, spot-proof, and acid resistant. The process is said to leave the fabric soft, to increase luster and tensile strength, and to provide a washable finish.

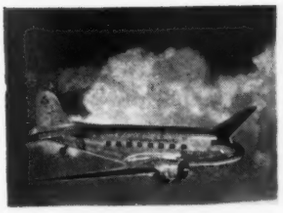
An Outing and Election

The Textile Designers, Analysts and Technicians Association will hold its annual summer outing for members and their wives at South Shore, Mass., on July 19. Frederick Bradbury, of Luther Mfg. Co., will be in charge of arrangements. This date was set at the annual meeting of the Association on June 15 in Fall River, Mass. At the latter meeting Leo Chabot, Pepperell Mfg. Co., was elected to the presidency; Frank Kostecki, of Warwick Mills, first vice-president; Frederick Bradbury, second vice-president; Amadee Chevalier, of Warwick Mills, treasurer; Matthew J. Wayner, Abdon Textile Co., secretary.

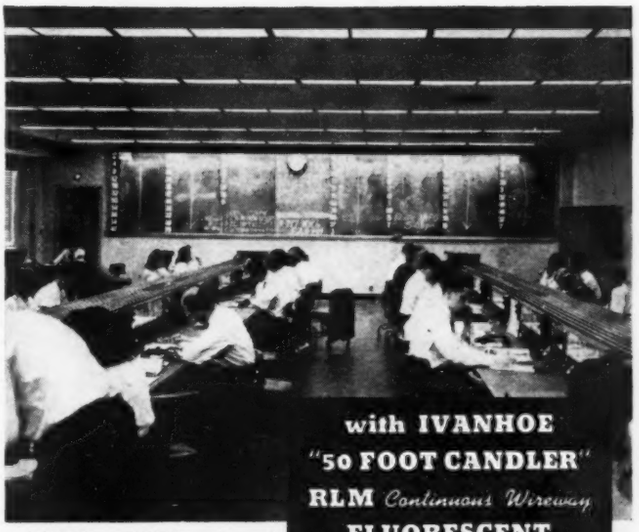
Philadelphia School Issues Booklet on Textiles

An extremely effective public-relations job has been done by the Philadelphia Textile School in preparing and distributing 10,000 copies of a booklet entitled "Textiles" which tells both in words and in pictures what the textile industry is, its size and its product, the place of the textile school and the importance of textile education, and something about the Philadelphia Textile School itself. The beautiful full-page photographs which illustrate the book were taken in the school by Stanley H. Goldsmith, Jr., of the class of 1934.

FOUR WOOL GROWERS' WIVES have recently been visiting in the East on the invitation of Col. C. F. H. Johnson, president of Botany Worsted Mills. They were taken on a special trip through the Botany plant at Passaic to see the processes which convert raw wool into fabrics. With their husbands and families, these women preside over sheep flocks which produce 1,500,000 lb. of wool. They are from left to right: Mrs. E. C. Smith, Salt Lake City, Utah; Mrs. Marsh Lea, Fort Stockton, Tex.; Mrs. Harold Cohn, Heppner, Ore.; Mrs. R. I. Thompson, Heppner, Ore.



AMERICAN AIR LINES GET BETTER LIGHT *Fast-Economically* TO SPEED VITAL OPERATIONS



"NERVE CENTER" of great American Air Lines at LaGuardia Field, N. Y. is this busy Reservation Room, lighted with IVANHOE "50 FOOT CANDLER" for maximum worker efficiency.

THIS BETTER FLUORESCENT LIGHTING SYSTEM CAN INCREASE YOUR PRODUCTION—HELP CUT COSTS

• IVANHOE "50 FOOT CANDLER" went to work for American Air Lines quickly and economically. It can do as much for you. This new and better *lighting system* is engineered that way. Its built-in wireway contains up to 80 per cent of necessary building wiring. Cuts installation costs from 30 to 50 per cent. Permits people to go right on working while system's going in. Maintenance? A cinch—with conveniently removable reflectors.

We put *more* time and money into "50 FOOT CANDLER" at *our* factory so you have less to put in at *yours*. We developed the continuous fluorescent lighting system—have spent the past two years improving it. Investigate it now as a paying production tool for you. Write for *helpful* new booklet 1 C.

THE MILLER COMPANY
MERIDEN, CONN.
Pioneers in Good Lighting Since 1844

Pre-tested for Performance

For Savings Specify **DARNELL**

DARNELL
DOUBLE BALL-BEARING
CASTERS

A SAVING AT EVERY TURN

- made in all sizes in both swivel and stationary types
- furnished with either semi-steel or rubber tread wheels

Yours **FOR THE ASKING!**

The new Darnell Manual describes nearly 4000 casters and wheels for light, medium and heavy duty use.

Darnell Corp., Ltd.
LONG BEACH, CALIFORNIA
36 N. CLINTON ST., CHICAGO
60 WALKER ST., NEW YORK CITY

Telling the World

Among the effective promotional booklets received recently are the following:

"Kendall Mills—A Textile Leader," prepared to give business friends of the Kendall Mills a better understanding of the background of the company, its plants, products and personnel. The treatment is largely pictorial.

"Interiors Beautiful," a consumer booklet prepared by Louisville Textiles, Inc., Louisville, Ky., for the purpose of disseminating helpful, home-decorating advice to housewives. It is a portfolio of constructive ideas and suggestions.

Bibb Program Described In Nation-Wide Broadcast

Fulton Lewis, Jr., nationally-known radio commentator, told the country about Bibb Mfg. Co.'s part in national defense over a nation-wide radio hook-up from the spinning room of No. 1 mill recently. Radio station WBML, Macon, Ga., sent the program over the Mutual Broadcasting System. The radio reporter interviewed Bibb's president, Col. W. D. Anderson, about the way in which Bibb workers are helping the Nation to prepare for defense. Mr. Anderson said that 40% of all the Bibb's orders now are for goods that go for defense and that 1,000 workers have been added to the payroll for the increased work.

Carolina Yarn Association Holds Annual Meeting

The annual business meeting of the Carolina Yarn Association was held at Sedgefield Inn, June 3, and the following officers were elected to serve for the coming year: President, Gordon Hope, A. M. Tenney Associates; Vice-President, H. B. Summerell, North American Rayon; Secretary, Frank Causey, C. W. Causey, Jr.; Treasurer, Jas. McDowell, Hemphill Company.

Textile Golf Tournament at Charlotte, N. C.

The third annual Textile Golf Tournament with more than 200 entrants was held at the Carolina Club, Charlotte, N. C., June 7 and 8. The title in the mill men's division went to Carl Jordan of Rock Hill (S. C.) Printing & Finishing Co., while Erwin Laxton of Arnold, Hoffman & Co. won out in the salesmen's division. In the team competition the National Weaving Co., Lowell, N. C., won the ACMA trophy.

This and That

Casein fiber and rayon staple blends are being employed in a group of spun rayon fabrics introduced recently by Brand & Oppenheimer, Inc. The casein fiber is produced by a subsidiary of National Dairy Products, Inc.

A new process for making cotton and other fabrics mildew resistant has been developed by the U. S. Department of Agriculture, and a public service patent covering the process has been granted to Helen M. Robinson of the Bureau of Home Economics. The process consists of immersing the fabrics first in a solution of cadium or copper salts and then in morpholine. This treatment precipitates a insoluble compound on the fabric.

Newest textile use for Fiberglas is in tarpaulins. The material is said to be lighter in weight than canvas and is fireproof and mildew-proof.

Introduction of Nylon seamless hosiery made on 400-needle machines from 30-den. yarn has been announced

by Gotham Silk Hosiery Co. This is said to be the first seamless Nylon hosiery to be made on 400-needle machines.

Saran is a trade name registered in the U. S. Patent office by the Dow Chemical Co., Midland, Mich., and the product is manufactured by no other concern. This corrects a statement on page 64 of the May, 1941, issue of TEXTILE WORLD in connection with a picture of fly-casting line made of Saran.

Textile Markets are Slowed Up by Caution

Cotton goods: Ceilings on gray goods 15% or more under market quotations gave mill men a lot to think about as July opened. Business was completely at a standstill pending readjustment. Raw cotton touched 11-year highs on June 27 with all months over 15c. during the day. Cotton men believe price fixing will be brought into Congress in the near future. The Henderson ceilings are described as utterly inequitable by goods men and as likely to result in market distortions, with mills dropping some constructions in favor of those which show the most profit.

Wool goods: Renewed call for army goods was the center of interest. Over 17,000,000 yd. were added to the backlog of mills and production schedules as far ahead as the first quarter of 1942 are being laid out. Prices on civilian goods are strong with buyers seeking deliveries of what they have on order. The smaller clothers may be in difficulty over supplies before the end of the year, and already cloth jobbers are swamped with inquiries and orders. Women's wear trade has tightened up and buyers have placed the bulk of their commitments for fall. The labeling act goes into effect July 15 and opinion remains divided as to its outcome.

Rayon: Change in selling terms for rayon were made by most producers last month from 2% 30 days to net 30 days. Elimination of the discount is equivalent to a rise of about 1c. per lb. Nylon prices were reduced at Mid-June by about 3% and the discount of 2% dropped, the net saving apparently being about 1%. The 40 denier is now $3.10 to $3.85 net 30 days, against $3.27 to $4.04 less 2% 30 days in the Feb. 7 list. A 20-denier Nylon with 7 filaments is listed at $5.50. The rayon market is increasing in tightness with buyers wanting more than is available.

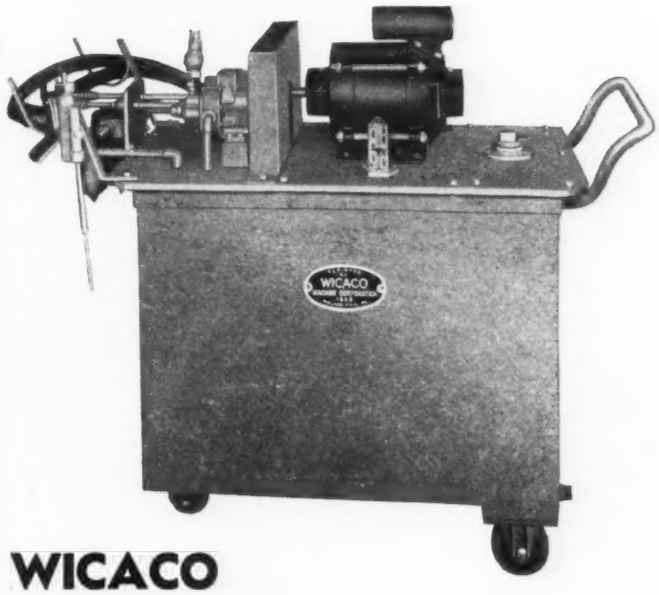
Raw silk: Although mill takings in U. S. have moved along with little change in the early months of the year, raw silk prices have been gradually firming until late last month the basic Crack XX 78% went up to $3.05.

Hosiery: Full-fashioned makers opened their silk lines for fall at scant changes from previous levels. In many cases buyers' orders at these figures were restricted by mills to their initial orders for spring. When silk went over $3, a few advances were made and early in July the market was moving upward by small amounts, which were however not likely to affect retail brackets. Nylon hosiery was slightly reduced, but again not by enough to change retail figures. Seamless goods were being advanced following the higher wage minimum. The hosiery industry is being urged voluntarily to reduce the variety of its product in line with simplification of the nation's economy.

Underwear: Unfilled orders for underwear are reaching record proportions. Prices have been handled conservatively and speculation among buyers discouraged. Jobbers and retailers are still picking up what they can from various sources, but the bulk of fall business has been placed.

Outerwear: Knitters report unusual volume in advance fall business in sweaters. Bathing suits have closed a successful season and makers expect 1942 openings in late August or early September with some early birds ready for action by the end of this month.

New!



WICACO

SPINDLE OILER

Saves Money—Oil—Time

This unique machine greatly reduces the cost and time required to drain and fill a spindle bolster with fresh *oil*. The two-way nozzle withdraws the dirty used oil and fills the base to the proper level with one squeeze of the handle. No overflowing —no dirty yarn. Evacuated oil is drawn back into the tank where it is renewed through filters and a magnetic separator which removes any ferrous particles. The machine is entirely self contained, readily portable, and requires no connections except to your lighting circuit. It is inexpensive to purchase and quickly pays for itself in savings on *labor* and *oil*.

Write Today for Complete Details and Price

The WICACO MACHINE CORPORATION

Precision Workmanship Since 1868

WAYNE JUNCTION, PHILADELPHIA, PA.

Here's the Key!

Pure, 100% soft, iron-free water will open up new profits for any textile mill or finishing plant. And the surest, most economical method of guaranteeing a continuous supply is to install a

HUNGERFORD & TERRY WATER PURIFICATION SYSTEM

Aside from cutting way down on the cost of soaps, oils, detergents, etc., you will note an immediate improvement in the quality of your fabric. Whites are whiter, colors brighter, dye-matching more accurate and there's a definite reduction in spoilage . . . We will make it our business to analyze your water supply and estimate on correcting the trouble if it exists. This service involves no fee, no obligation . . . write us today.

• • •

HUNGERFORD & TERRY

WATER PURIFICATION PLANTS DESIGNED
INSTALLED *and* GUARANTEED
CLAYTON, NEW JERSEY

New Record in World Rayon

Germany again leads—Rayon passes wool for first time in history

WORLD PRODUCTION of rayon—including both yarn and staple fiber—reached a new high record production level of 2,380,810,000 lb. in 1940, an increase of 7% over 1939, according to the *Rayon Organon*, published by the Textile Economics Bureau, Inc. Of the 1940 total, 1,143,960,000 lb. were rayon filament yarn and 1,236,850,000 lb. were rayon staple fiber.

Rayon was the only fiber to set a new high production record in 1940, and, for the first time in history, the world output of rayon exceeded the world production of raw wool (scoured basis). Thus rayon moved into second place in the four fiber group, the total output being exceeded only by that of cotton. Wool output ranked third and silk fourth.

Germany in 1940, as in 1939, again was first in total rayon production. Total rayon production in Germany and occupied countries amounted to 825,000,000 lb., or 35% of the world's total. Japan was second with 525,000,000 lb., or 22%, closely followed by the United States with 471,170,000 lb., or 20%.

Filament Yarn: The increased output of filament in the United States is especially noteworthy, totaling 390,070,000 lb., in 1940, or 34% of the world production, definitely establishing this country as pre-eminent in the rayon yarn field. The dominance of the United States in the world rayon yarn picture is further emphasized by the fact that Germany, including many subjugated countries, accounted for only 22% of the world's yarn total last year. Japan's production in 1940 declined from the 1939 level due to a shortage of raw materials, coal, and power.

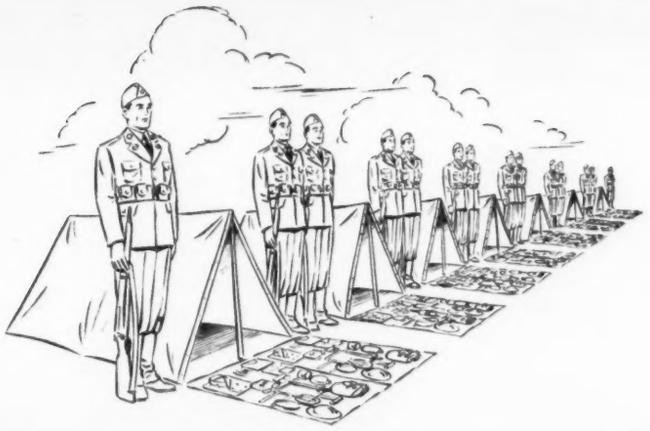
Staple Fiber: World production of staple fiber in 1940, aggregating 1,236,850,000 lb., set a new record total for this branch, exceeding the previous high in 1939 by 14%, and also was larger than the world production of rayon filament yarn for the first time in history. The astonishing growth of rayon staple fiber production is strikingly illustrated by the fact that the 1940 world output was *twice* the world output of this product in 1937, a span of only three years.

With the exception of Japan and the United Kingdom, the 1940 output of rayon staple fiber of all other principal producing countries was in excess of the 1939 totals. On a percentage basis, the United States' production of staple fiber in 1940, at 81,100,000 lb., showed the greatest gain over the 1939 level with an increase of 58%.

Following is the world production of rayon filament yarn plus rayon staple fiber, in thousands of pounds, for the more important countries for the years 1940, 1939, and 1938 (000 omitted):

	1940	1939	1938
Germany*	825,000	600,000	470,000
Japan	525,000	548,850	584,600
United States	471,170	379,940	287,485
Italy	325,000	310,000	268,310
Great Britain	150,000	180,000	138,195
All Others	84,640	208,700	197,295
TOTAL	2,380,810	2,227,490	1,945,885

* German's output for 1940 includes the production of Belgium, France, Austria, Czechoslovakia, Hungary, Netherlands, Norway, Poland, and Rumania; for 1939 the totals of Austria and Czechoslovakia are included; and for 1938 it includes the output of Austria.



Meeting the Challenge of Textiles for Defense

The Defense Program has placed on the shoulders of the Textile Industry, almost overnight, the greatest responsibility it has ever been called upon to assume.

The Government requires 219 different types of cloth—for clothing, hats, bedding and tents in staggering volume and of most extraordinary quality.

In the laboratory of the War Department Quartermaster's Depot, every fabric is literally taken apart. The wool-content, heat-retention, color fastness, ply-quality—all are exactly determined.

It is claimed that the soldiers of the new army are not only the best dressed soldiers in history, but that their equipment is far superior in quality to anything produced and sold for civilian use.

To quote General W. A. McCain, executive officer of the Department: "A soldier with a cold or grippe is no good to Uncle Sam. We are simply using scientific means to make sure that the clothing our new army wears will more than adequately protect him."

Men of the Textile Industry—You are giving a magnificent answer to the challenge of Textiles for Defense. You are producing the finest uniforms that Uncle Sam's soldiers have ever worn.

To achieve this tremendous production—without sacrificing the needs of civilian use—you are demanding the fastest equipment that the textile machinery builders can produce.

We are proud to play a part in this mighty drama of Textiles for Defense. For 121 years, we have helped to speed the production of textile necessities for the armed forces of the United States—in the Mexican War, the War between the States, the Spanish-American War, the first World War . . . Let us help you—NOW—to bigger, faster, more uniform production.

H. W. BUTTERWORTH & SONS CO. Phila., Pa., Serving the Textile Industry Since 1820. Offices: Providence, R. I. and Charlotte, N. C. In Canada—W. J. Westaway Co., Hamilton, Ont.

***64%**

of equipment now in use in the wet end of textile finishing cannot operate at a profit in competition with modern machines.

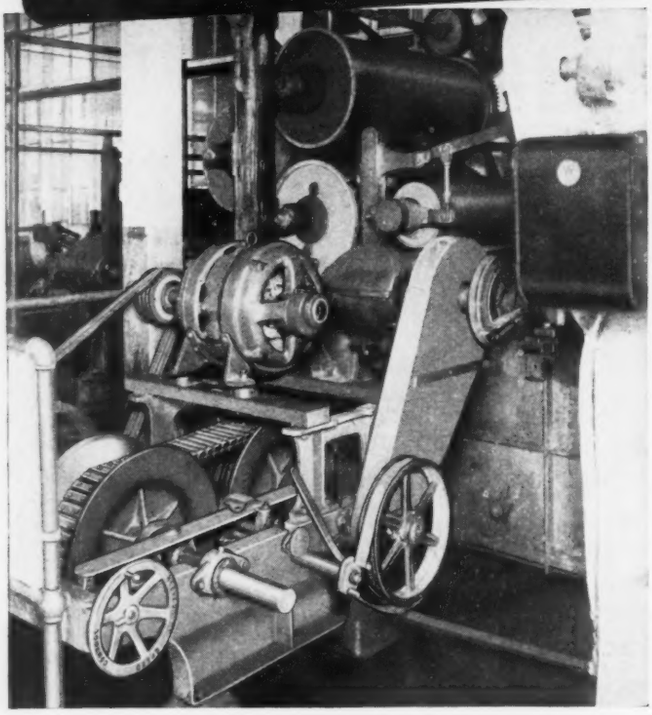
*Proved by Research

Butterworth

Complete Mastery

OVER CLOTH SPEEDS IN ENTIRE RANGE WITH

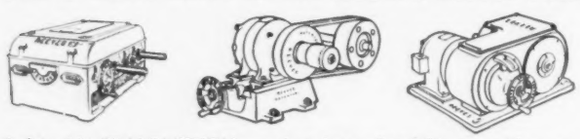
REEVES SPEED CONTROL



FOR ANY WEIGHT OR TYPE OF CLOTH

Through manual handwheel adjustment of this REEVES Variable Speed Transmission, cloth speed through the entire range—padder, dye machine, mangle, tenter and dry cans—is accurately controlled to meet requirements of various types and weights of goods and other varying conditions. Other sections of range are automatically synchronized with the "master" machine by REEVES highly sensitive hydraulic automatic control. Many other helpful textile installations described and illustrated in comprehensive, 124-page Catalog-Manual G-397. Write for it.

THE 3 BASIC UNITS IN THE MODERN REEVES LINE



Left to right: TRANSMISSION provides infinite adjustability over wide range, 2:1 to 16:1 inclusive; modern, compact, open and enclosed designs in sizes up to 82 H.P. . . . VARI-SPEED Motor Pulley, simple, direct drive for requirements from fractional to 15 H.P. 3:1 range. MOTODRIVE combines motor, speed varying mechanism and reduction gears; sizes to 10 H.P.; ratios of speed variation 2:1 through 6:1.

REEVES PULLEY COMPANY, *Dept. W*, COLUMBUS, INDIANA

REEVES Speed Control

Apprentice Training

Will help overcome shortage of trained workers

By E. A. TERRELL

Terrell Machine Co.

FOR ALL PRACTICAL PURPOSES we are today in a state of war. Modern wars are won by production, and production is the result of intelligent use of materials, machines, and trained men, plus the vital element of time. If we run our plants more than 40 hr., we are charging ourselves time and a half for our own defense; if we try to run two or three shifts, we are confronted by a shortage of trained workers. That shortage is going to become worse and worse as the defense program expands. This tremendous production program calls for an unprecedented amount of training of men.

Most of you already have your own training plans for textile workers and you can, within a reasonable time, train needed personnel. Most of you have your own shops for maintenance and repair and you can train some of the additional machinists so badly needed in the defense and allied industries. I urge you to do this in the interest of the nation and in your own interest as well.

We fortunately began our training program before the emergency became so apparent. We studied the apprentice systems of several large shops and decided that the most effective method of training all-round, first-class men would be to equip a separate shop, under a separate foreman selected for his interest in training, his general mechanical ability, and his attention to cleanliness and order.

We found the I.C.S. had exactly what we needed in its machinist apprentice course, which we promptly adopted. The company pays one-half the cost of the I.C.S. course; the employee pays the other half, plus necessary supplies and equipment. Small weekly deductions are made to cover payment for course and tools. We start our apprentices at 30c. an hour and increase them every six months according to progress made.

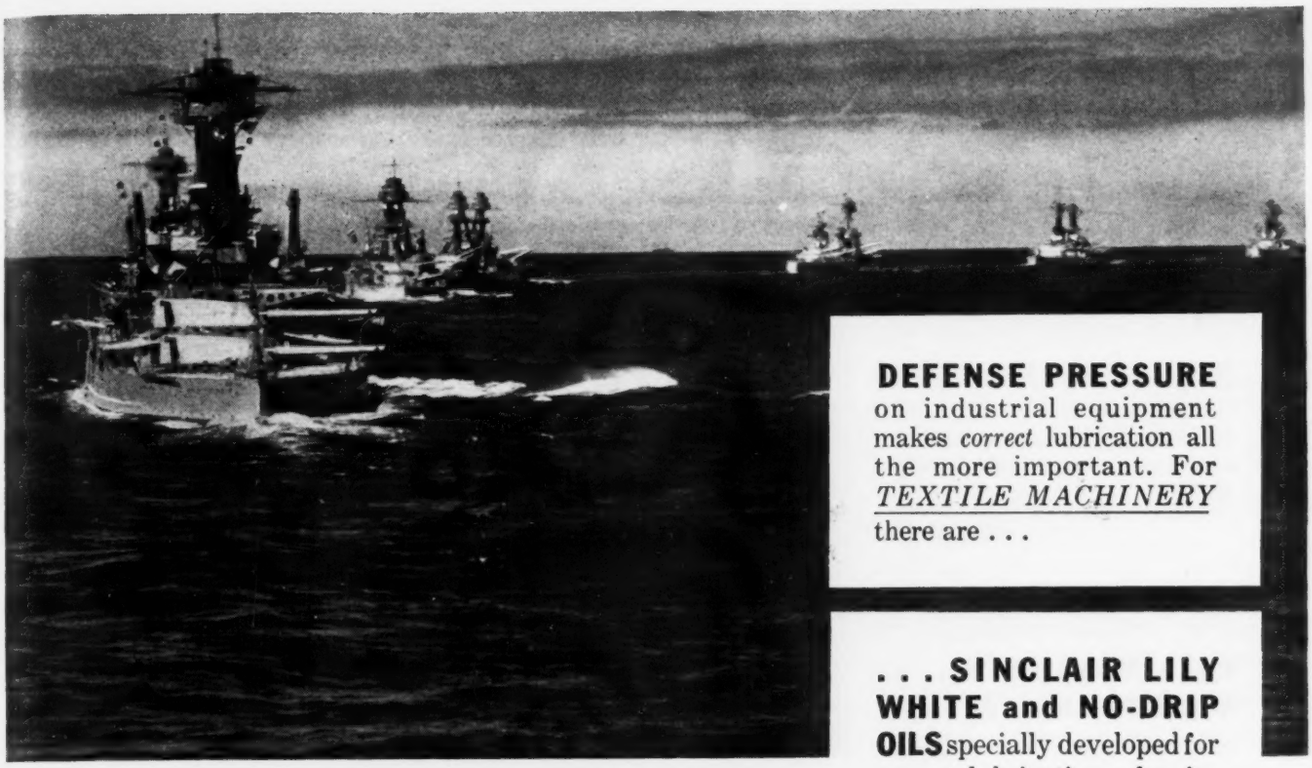
Apprentices are selected by an apprentice committee. Preference is given to boys from local or near-by areas, and to boys whose fathers have been mechanics. Farm boys are also carefully considered and usually have shown good progress. After a probationary period of three months, the candidates are either dropped for lack of aptitude and attitude or are signed up for the full course.

It is too early for us to produce actual figures, but we think the apprentice shop is already on a self-supporting basis. We are doing a substantial amount of production work in it and are also producing many of the word-working knives and boring tools required by our bobbin plant.

Seven of our boys are capable of operating production machines and five of them are now being used in that capacity. These boys are capable of doing better work than many poorly trained machinists who have had years of experience, and they are improving every day. The course includes industrial economics which gives the students an understanding of industrial organization, its functions, and its obligations to society.

We believe that industry must bridge the gap between a school system which does not teach its graduates how to make a living and years of college training which so many of our young people cannot afford. If it does this job, and does it well, it will have done much to soften the economic shock which will follow this war.

* Abstract of paper presented at meeting of Southern Textile Association, at Myrtle Beach, S. C. (see page 62)



DEFENSE PRESSURE on industrial equipment makes *correct* lubrication all the more important. For *TEXTILE MACHINERY* there are . . .

. . . SINCLAIR LILY WHITE and NO-DRIP OILS specially developed for *correct* lubrication of spindles, top rolls, and comb boxes . . . also oils for *knitting machinery*. Get details from nearest Sinclair office, or write Sinclair Refining Company, 630 Fifth Avenue, New York, N. Y.

Write for "The Service Factor"—a free publication devoted to the solution of lubricating problems.

SACO LOWELL *long draft spinning frames in plant of D. C. Converse Co., Glendale, S. C. Lubricated with Sinclair Lily White Oil.*

SINCLAIR TEXTILE LUBRICANTS

SINCLAIR REFINING COMPANY (Inc.)

2540 West Cermak Road, Chicago • 10 West 51st Street, New York City • 1907 Grand Avenue, Kansas City • 573 West Peachtree Street, Atlanta • Fair Building, Ft. Worth

Years before their contemporaries—courageous, resourceful Norsemen pushed their frail craft into unchartered waters, opening the routes to new lands.

This same pioneering spirit stands behind DENMAN'S development of rubberized fabric for quality loom parts. Denman's famous research laboratories gave to the textile industry the first fabric loom parts which combined the extra toughness and resiliency necessary to withstand the terrific pounding of today's high-speed looms. Year after year, the outstanding performance and proven economy of DENMAN Fabric Loom Parts has resulted in their choice as standard equipment in the country's leading mills.

For LOWEST COST PER LOOM PER YEAR Specify DENMAN

PICKERS • LUG STRAPS • HOLD UPS • ETC.

The Terrell Machine Co. *Inc.*

CHARLOTTE, N. C.

Luther Pilling, Danielson, Conn.—N. E. and Canada
E. W. S. Jasper, Inc., Elizabeth, N. J.—Penn. and N. J.
Geo. Thomas & Co., Manchester, Eng.—European Agt.

NEWS ABOUT MEN

A. C. Dunson is the new president of the Dunson Mills, La Grange, Ga. Mr. Dunson, who has been plant superintendent for some time, will also continue in that capacity.

J. N. Edens, Sr., president of the First National Bank and of East Texas Chamber of Commerce, has been elected president of Corsicana (Tex.) Cotton Mills. He succeeds the late R. L. Hamilton. **M. E. Woodrow** is vice-president and general manager; **E. E. Sheehey** is secretary treasurer.

Robert T. Stevens, president of J. P. Stevens & Co., New York, has been appointed Coordinator of OPM's Defense Contract Service at New York.

Benjamin D. Riegel, president of Ware Shoals (S. C.) Mfg. Co., of Riegel Textile Corp., and of Trion (Ga.) Co., received the degree of Doctor of Laws at the recent commencement of the Presbyterian College, Clinton, S. C.

Garnett Andrews, president of Richmond Hosiery Mills, Rossville, Ga., after a lapse of more than 50 years, has received his diploma from the Virginia Military Institute at Lexington, Va. He attended the college from 1886 to 1889, and left it to attend the Worcester Polytechnic School.

Miss Annie Bell Towers has been elected president of the H. C. Townsend Cotton Mill, Anderson, S. C., succeeding **Mrs. N. T. Townsend.**

Thurmond Chatham, president of Chatham Mfg. Co., Elkin, N. C., was awarded the degree of Doctor of Textile Science by the N. C. State College at Raleigh, N. C.

Lawrence Dale, Ray Loveridge, James Howard and **Herman Waterhouse** have established a wool goods selling firm in New York under the style of Waterhouse Sales Co. This firm will sell the product of certain woolen looms in the River Mills, Woonsocket, R. I.

Fred Klein, vice-president of Belding-Heminway-Corticelli, Inc., New York, resigned from that organization June 30 and about Aug. 1 will establish a new fabric organization. **Jack Goldberg,** sales manager for the cutting-up trade of the Belding firm, has also resigned and will be associated with Mr. Klein in the latter's new organization.

Frank Levi, manager and merchandiser of all fabrics of R. H. Macy & Co., New York, and associated with that firm for a number of years, has resigned to become general manager of the Fabric Division of Belding-Heminway-Corticelli, Inc., New York.

Samuel Richard Fuller, Jr., is resigning as Chief of the Materials Branch, Production Division, Office of Production Management, to return to the presidency of the North American Rayon Corp., New York. Mr. Fuller joined the defense organization on Feb. 20 as Chairman of the Production Planning Board. Later he was chosen to head the Materials Branch and resigned from the chairmanship of the Production Planning Board to carry on his duties with the Materials Branch.

Donald Comer, chairman of the board of Avondale Mills of Alabama, has been reappointed a member of the board of directors of the Textile Foundation for a term of four years. His reappointment is of particular significance at this time, in view of his warm enthusiasm for the Foundation's plan for the expansion of its activities, through closer association with the U. S. Institute for Textile Research.

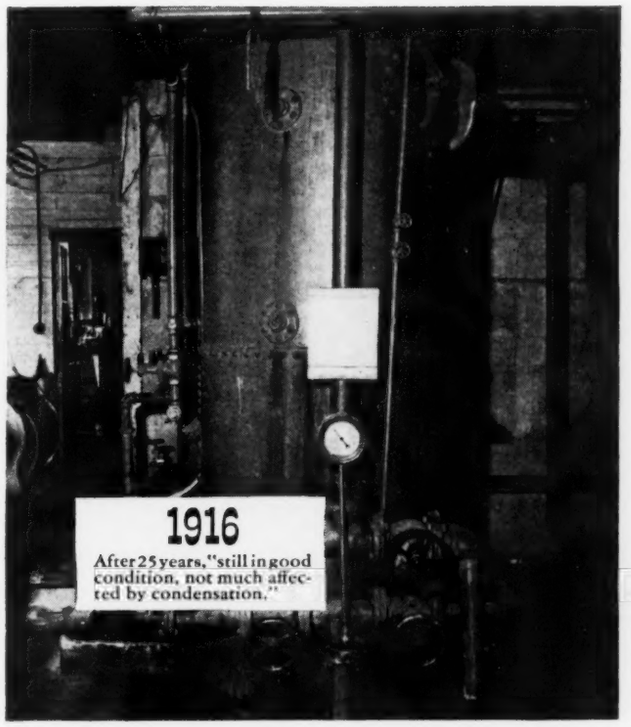
Charles S. Fowler has been appointed general manager of Hartford Rayon Corp., Rocky Hill, Conn., and will make his headquarters there. Mr. Fowler was for nine years sales manager of rayon gray goods for Lorraine Mfg. Co., and recently was vice-president of National Silk Spinning Co.

Clarence L. Ederer, of Ederer, Inc., Philadelphia, was re-elected president of Alumni Association of Philadelphia Textile School at group's recent annual meeting and outing. Other officers elected were: 1st vice president, **Milton Schmidt** Normington & Schmidt, New York; 2nd vice president, **Stanley H. Hart,** Hart & Foster, Philadelphia; 3rd vice president, **Howard P. Galloway,** TEXTILE WORLD, New York; treasurer, **W. Lyle Holmes, Jr.,** Archibald Holmes & Son, Philadelphia; secretary, **Frank L. Giese,** Philadelphia Textile School.

Carl C. Mattmann, Jr., director of fabric development for A. M. Tenny Associates, Inc., New York, has been elected a Fellow of the Textile Institute of Manchester, England.

Van Raalte

"always used PERMUTIT* water softeners"



1916
After 25 years, "still in good condition, not much affected by condensation."

1941
Newest of four units... still Permutit because "previous installations were very satisfactory."

—because good soft water is essential for economical, high quality dyeing and finishing

—says Mr. J. O. Montgomery, Manager

Van Raalte's North Tonawanda plant makes and dyes cotton, silk and synthetic yarn cloth. Hardness of the raw water is about 120 p.p.m., and it varies with the seasons. But not for Van Raalte. "Soft water is a primary requisite for textiles . . . we could not run a dyehouse successfully without it," says Mr. Montgomery. "We installed Permutit equipment in 1916; we now have four units. Our water is *soft, clear, iron-free and uniform.*"

Van Raalte is just one of the many famous textile firms who are protecting quality by controlling process water. Permutit cuts costs, too—in soaps and dyes and in boiler repair.

Write for free booklet to The Permutit Company, Dept. B 330 West 42nd Street, New York, N. Y.

*Trademark Reg. U. S. Pat. Off.

PERMUTIT

WATER CONDITIONING HEADQUARTERS

BEATS THE DUTCH!

AROOSTOOCRAT POTATO STARCH

EQUALS THE FINEST IMPORTED

Remember that fine quality starch you *used* to get from Europe? Today you can get its EQUAL—many say its SUPERIOR in AROOSTOOCRAT, the potato starch made by European methods. AROOSTOOCRAT sets a new standard in Starch Quality and Uniformity. It costs no more than ordinary starches —and quickly proves its GREAT economy over cheap starches. A 99% waste-free laboratory-controlled processing means substantial economy in production —and we pass that economy on to you. Investigate this Quality starch. Find out now about AROOSTOOCRAT . . .

Write for Booklet telling why

"IT BEATS THE DUTCH"

You'll be interested in the modern processing of this finer starch—this book tells you all about it. Just send your name and address for your copy today.

AROOSTOOK POTATO PRODUCTS INC.

HOULTON, MAINE

Sales Agents **Morningstar Nicol Incorporated**

630 W. 51ST. ST. . . . . NEW YORK CITY

NEWS ABOUT MEN

Donald L. Lee, Jr., head of the department of textile engineering at Texas Technological College, Lubbock, Tex., recently resigned to become senior cotton technologist of the cotton processing division of the Southern Regional Research Laboratory at New Orleans, La. **Cash M. Stanley, Jr.,** assistant professor of textile engineering, was elected to head of the department.

Harry A. Biggi, North American Rayon Co., was elected president of the Rayon Yarn Peddlers Association of New England at the annual meeting in June, held at the New Bedford (Mass.) Country Club. **Walter T. Barker,** New England Rayon Co., was elected vice-president, and **Walter Mansfield,** Celanese Corp., was made secretary-treasurer. **Robert O'Blenis,** retiring president (with the Du-Pont Co.), was voted appreciation for his work during the year. The program included an outing with sports, presenta-

Textile Men in Armed Services

Bachrach

COLONEL J. EBERT BUTTERWORTH

Colonel J. Ebert Butterworth, vice-president and treasurer of H. W. Butterworth & Sons Co., entered U. S. Army Service on June 24 as director of recreation at Camp Ritchie, Maryland. He has been granted a one-year leave of absence from the Butterworth company. Colonel Butterworth has been treasurer of the Butterworth organization since 1919. With J. Hill Zahn, he opened the Butterworth southern office in 1923 and represented the company in the South from 1923-30. Since 1930, he has been in the home office in Philadelphia. Colonel Butterworth was commissioned captain of infantry in 1917 and served in France the next year. He joined the reserves in 1920.

Elliott White Springs, president of Springs Cotton Mills Co., has been called into active service by the U. S. Army and has been made executive officer at the Charlotte, N. C. Air Base and promoted to rank of Major. Major Springs in the last war shot down at least 11 planes in combat over France. He holds the American Distinguished Service Cross, the British Distinguished Flying Cross, and the American Aero Club Medal of Honor.

Fulton Rindge, treasurer of Cocheco Woolen Mill, East Rochester, N. H., and the Gonic (N. H.) Mfg. Co., has been called, as a member of the Naval Reserve, to active duty in Washington, D. C., with the rank of lieutenant commander. He will be stationed in the Naval Supply Station.

Harold M. Bryson, for many years on the staff of Stanfields, Ltd., textile manufacturers, Truro, N. S., has been promoted to second in command of a Canadian infantry regiment now serving in England. Major Bryson was a captain in the Canadian militia when war was declared.

J. R. Newell, assistant superintendent of Mandeville (Ga.) Mills has gone to Wilmington, N. C., to assume duties as officer in U. S. Army at Fort Davis.

PRIVATE LEON AGATSTEIN, Headquarters company, 18th Quartermaster Battalion, Armored, Pine Camp, N. Y. Formerly stylist for Stonekirk Worsted Co., New York, N. Y.

Readers are invited to send pictures with captions concerning other men in the services.

HUNTER

Continuous Range Cloth Carbonizing

BULLETIN CC

The Newest Advance in Carbonizing Operation Consisting of A Modern Hunter Wetting Out Tank, Acid Tank, Vacuum Extracting System and Carbonizing Dryer Operating as a Synchronized Unit with Patented Range Drive

NOT only in fulling, washing, stock and tenter drying has Hunter equipment made tremendous strides during the past few years. There is now available our new Cloth Carbonizing Unit that largely eliminates costly repairs and upkeep, enabling finishing rooms to carbonize cloth uniformly and economically at the highest possible hourly production compatible with high quality.

This modern Hunter Unit consists of a Wetting Out Tank with a Vacuum Extracting System, an Acid Soaking Tank and a Carbonizer. With this up-to-date unit, any mill can simplify and improve its cloth carbonizing as explained in the following pages.

Supplement to Bulletin CC

HUNTER

Continuous Range Cloth Carbonizing

THE REQUIREMENTS

For Successful Piece Carbonizing

FREE

TO ANY MILL MAN . . .

***regardless of what unit he now operates . . . who is interested in reducing* CARBONIZING COSTS**

TWO innocent looking booklets . . . charged with money-saving ideas for the mill man who reads them and applies the data they contain. Both are heavy with helpful information. They are practical and to the point.

Hunter's Booklet on Piece Carbonizing contains eight pages of text and illustrations. It will tell any mill man—regardless of what unit he now operates—how he can reduce costs and definitely increase the dollar value of his carbonized goods.

The booklet on the left is a most important aid to any mill contemplating or now doing piece carbonizing. It outlines clearly and fully the commercial and mechanical requirements for satisfactory carbonizing.

Hunter's new brochures on fulling and cloth scouring have several important pages of text and illustrations describing the means and method whereby:

(a) some six score mills have increased Fulling loads 50-100% and reduced Fulling time one-third or more, and

(b) substantially cut Rinsing time; save soap, water, and labor.

I certainly am interested in reducing my costs. Please send the following without obligation:

. . . . Brochures on Carbonizing

. . . . Brochure on Fulling and Scouring

. . . . Data on Stock and Tenter Drying

_____

_____

_____

MAIL THE COUPON TODAY!

JAMES HUNTER MACHINE COMPANY

FOUNDED 1847 • NORTH ADAMS, MASSACHUSETTS

***Western Representative:* E. G. PAULES, 343 Bendix Bldg., Los Angeles, Calif.**

"INDEX" To Better Quality Textiles

FOR	Dyeing Flameproofing	USE SOLVAY AMMONIUM CHLORIDE
FOR	Dyeing	USE SOLVAY CAUSTIC POTASH
FOR	Dyeing Hypochlorite bleaching Kier boiling Mercerizing Neutralizing	USE SOLVAY CAUSTIC SODA
FOR	Hypochlorite bleaching Oriental rug finishing Water conditioning	USE SOLVAY LIQUID CHLORINE
FOR	Mothproofing	USE SOLVAY PARA-DICHLOROBENZENE
FOR	Dyeing Softening	USE SOLVAY POTASSIUM CARBONATE
FOR	Acid neutralizing Degumming Fulling Scouring Soap building Softening	USE SOLVAY SNOWFLAKE CRYSTALS
FOR	Acid neutralizing Fulling Hypochlorite bleaching Kier boiling Scouring Soap building Water conditioning	USE SOLVAY SODA ASH
FOR	Dyeing	USE SOLVAY SODIUM NITRITE
FOR	Acid neutralizing Degumming Fulling Scouring Soap building Softening	USE SOLVAY TEXTILE SODA

FOR TECHNICAL SERVICE In the Solvay Laboratories, textile men with years of experience study your problems and make recommendations on the basis of laboratory findings. *Solvay will be glad to send these textile specialists into your plant to study actual operating conditions and help adapt laboratory findings to specific plant conditions.* Write today to

SOLVAY SALES CORPORATION

Alkalies and Chemical Products Manufactured by The Solvay Process Company

40 Rector Street • New York, N. Y.

NEWS ABOUT MEN

tion of prizes, and a dinner in the evening at which **Mayor M. A. Glynn** of New Bedford was a guest.

Harold S. Birkby, who has been in charge of sales promotion, becomes sales manager for Cotton and Rayon Division, Pacific Mills. **J. E. Bradley,** who has had charge of the Home Furnishings and Rayon Divisions, becomes merchandise supervisor. **DeWitt Peterkin** is appointed special sales assistant to **Auguste Richard,** vice-president, and will handle certain important accounts. The merchandise departments and their heads will be as follows: Cotton Women's Wear Dept.—including percales, flannels and wash goods—**Walter Belden;** Shirting and Pajama Fabrics Dept.—including Men's underwear, pajamas and shirtings—**Arthur L. Singer;** Men's Sportswear Dept.—both rayons and cottons—**T. W. Evans;** Rayon Intimate Wear Dept.—**Murray Sokoloff;** Wide Sheetings and Domestics Dept.—**M. Gordon Gay;** Towel Dept.—**Edwin M. Levanion.** The Industrial Fabrics Dept., under **R. M. Everett,** the Raincoat Dept., under **C. E. Mead,** and the Lining Dept., under **Walter F. Mack,** will operate as at present, with **W. O. Jelleme** exercising general supervision, in addition to his other duties. **F. S. Blanchard** will continue to supervise advertising, promotion and publicity, in addition to his other activities. These changes are designed to improve both merchandising and selling efficiency, as well as to bring the marketing activities of the Division in line with the requirements of the new set-up of mill operations.

H. A. Newton, who has been connected with Pacific Mills for a number of years, has been made general superintendent of the Hampton Mills division, which includes the four Pacific plants in Columbia, S. C. He succeeds **W. P. Hamrick,** who retired.

Gerard Chapin, assistant general superintendent of Pacific Mills, Lyman (S. C.) Division, has been promoted to general superintendent. He succeeds **C. B. Hayes,** recently named vice-president in charge of operations in South Carolina.

Charles Laurendeau, was recently elected a director of Montreal Cottons Ltd., Valleyfield, Quebec. He is taking the place of Senator **R. Dandurand** Government leader in the senate who has resigned after a long term of office as a director.

ADDISON KOHOUT

Addison (Ed) Kohout has been appointed to the technical staff of Virginia Maid Hosiery Mills, Pulaski, Va., as chief chemist and dyer, having charge of finishing the production of all the Wallner Associated Mills. He recently resigned from a similar position with Nolde & Horst Co., Reading, Pa.

MacMillan Boyd has been appointed assistant sales manager of Canadian Cottons, Ltd., Montreal, Quebec.

Hugh Daniel, Hollywood stylist for Botany Worsted Mills, Passaic, N. J., has retired from active business to recover from illness.

Arthur A. Lunt has been added to the New York sales staff of Berkshire Knitting Mills, to head the New York sales division devoted to distribution of Berkshire branded full-fashioned stockings.

Conrad deFlebre has been elected a director of U. S. Finishing Co., Providence, R. I., to succeed **J. G. Bausher.**

Joe H. Thomson, of Neisler Mills, Kings Mountain, N. C., has recently been elected mayor of the city of Kings Mountain.

Glenn E. Penland, Asheville, N. C., with the North Carolina Department of Labor, for several years, has accepted the position of safety director for the Firestone Cotton Mills, Gastonia, N. C.

E. H. Bolen has been elected secretary of Southern-Brighton Mills, Shannon, Ga., succeeding **T. M. Gardner.**

C. C. Clontz, formerly of Hickory, N. C., has become manager of Goldston (N. C.), Hosiery Co., a new concern.

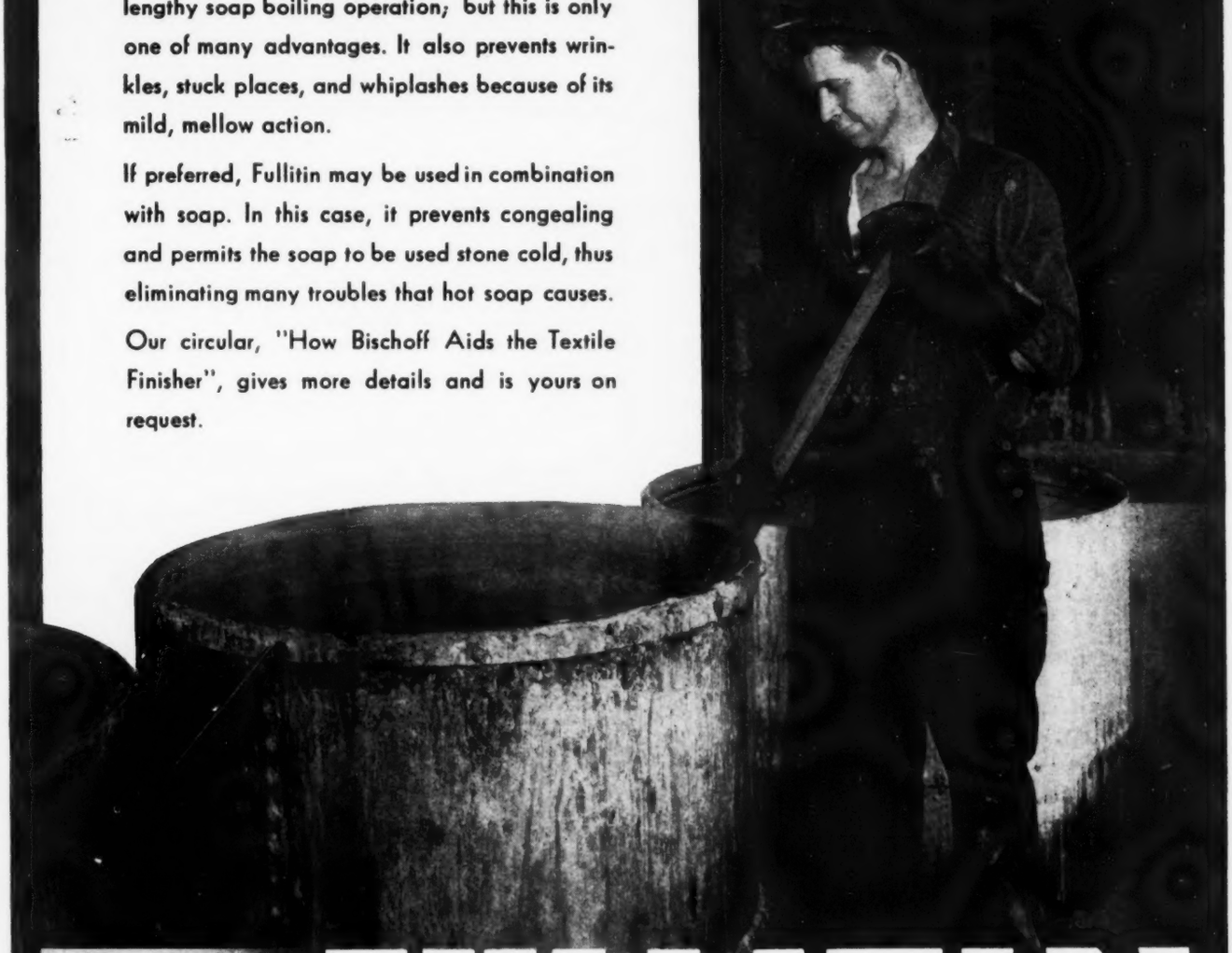
Peter H. Warburton, class of 1931, was chosen president of the New Bedford Textile Alumni Association at the annual clambake of the organization held at Dan's Pavilion, New Bedford, Mass. Other officers elected are: **Francis**

DON'T WASTE TIME BOILING SOAP

FULLITIN can be used in fulling to replace soap entirely, in which case it eliminates the lengthy soap boiling operation; but this is only one of many advantages. It also prevents wrinkles, stuck places, and whiplashes because of its mild, mellow action.

If preferred, Fullitin may be used in combination with soap. In this case, it prevents congealing and permits the soap to be used stone cold, thus eliminating many troubles that hot soap causes.

Our circular, "How Bischoff Aids the Textile Finisher", gives more details and is yours on request.



It's the Finish that Counts

FULLITIN

FOR PERFECT FULLING

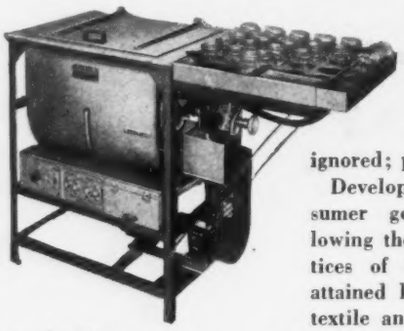
ERNST BISCHOFF COMPANY · INC ·

Founded 1908 Ivoryton · Connecticut

DON'T LOSE PERSPECTIVE

In the rosy late twenties the trend was so definitely toward the over-exaggeration of non-essentials that even the golfer was inclined to say "never mind the ball; where's the tee!"

While to no small degree will the successful prosecution of America's National Defense Program depend upon standardization in order to get uniformity, interchangeability and volume, many manufacturers are not integrating their efforts; true, the war effort must be paramount, but civilian good-will cannot be ignored; peace will return.



Develop and hold consumer good-will by following the successful practices of those who have attained leadership in the textile and dye industry—standardize on the use of Fade-Ometers and Launder-Ometers wherever sunfastness and launder-ability are involved. We tell you how in our catalogs; how the other fellow does it in our bibliographies.

Write for complimentary copies. No obligation.

ATLAS ELECTRIC DEVICES CO.

371 W. Superior St. Chicago, Ill.

COMPARE **point for point and you'll use**

SHAMROCK

Canvas **Baskets, Hampers, Trucks**

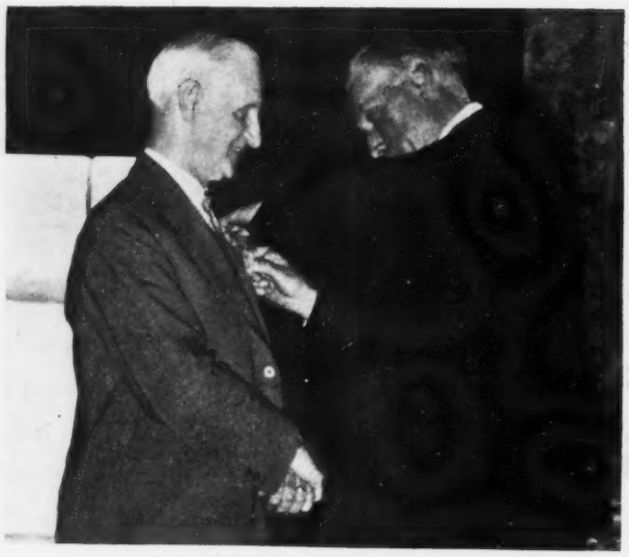
● Two (2) cross U center supports. (This sturdy construction is used on all Shamrock top-grade baskets of 6 bu. size or larger.) • Full 2″x1″ wood runners. • Runners cross-riveted completely through. • Steel slat, heavy-duty bottom construction—5 crosswise—2 lengthwise (less open space). • All runners cross-grooved. • Heavy duck — fine weave. • Leather reinforcements at end of strips. • Ends of all sewing seams brass-riveted.

Call your jobber TODAY! You'll always be glad you bought Shamrocks!

Write for Complete Catalog

MEESE, INC.
MADISON, INDIANA

NEWS ABOUT MEN



PROFESSOR BARKER RETIRES: With the graduation exercises of June 10, Professor Edgar Harrison Barker retired from the Lowell Textile Institute after 44 years of service. Immediately following the Commencement Exercises a testimonial dinner was held at the Vesper Country Club for Professor Barker, which was attended by all his associates at the Institute, administrative and maintenance as well as the faculty. He has been made Professor Emeritus. President Charles H. Eames of the Institute acted as toastmaster, and is shown above giving Prof. Barker a suitably-engraved lapel watch on behalf of the alumni

Tripp, '26, vice-president; **John Foster,** '28, treasurer; **Winifred Purdy,** '41 secretary. **Eliot Borden,** retiring president, served as master of ceremonies.

A. W. Frame, manager of the Waynesboro, Va., plant of E. I. duPont deNemours & Co., will be temporarily moved to the main office at Wilmington Del., assuming full responsibility in the acetate production division. **C. J. Bacon,** director of production at Wilmington, is engaged in special duties. During the absence of Mr. Frame at Wilmington, **K. Van H. Williams,** local superintendent, will assume charge of the Waynesboro plant.

Tom Osborne, formerly with Ware Shoals (S. C.), Mfg. Co.,. and for the last seven or eight years with the sales organization of Riegel Textile Corp., New York, has resigned.

Ken Burns won the prize for low gross at the fifth annual golf tournament of the New York Hosiery Industry at Knoll Country Club, Boonton, N. J., last month. **A. R. Cooper** took the prize for low net score.

Warren E. Baker, has resigned as divisional superintendent of Apponaug (R. I.) Co. which position he has held for the last two and one-half years. After vacation he will return to the industry in a new connection dividing his time between the New York market and the mill.

John A. Skedgell, of Grosvenor Dale Co., North Grosvenor Dale, Conn., was elected president of the Southern New England Textile Club at the recent annual meeting. He succeeds **Albert J. Owler** of Paul Whitin Mfg. Co., Northbridge, Mass.

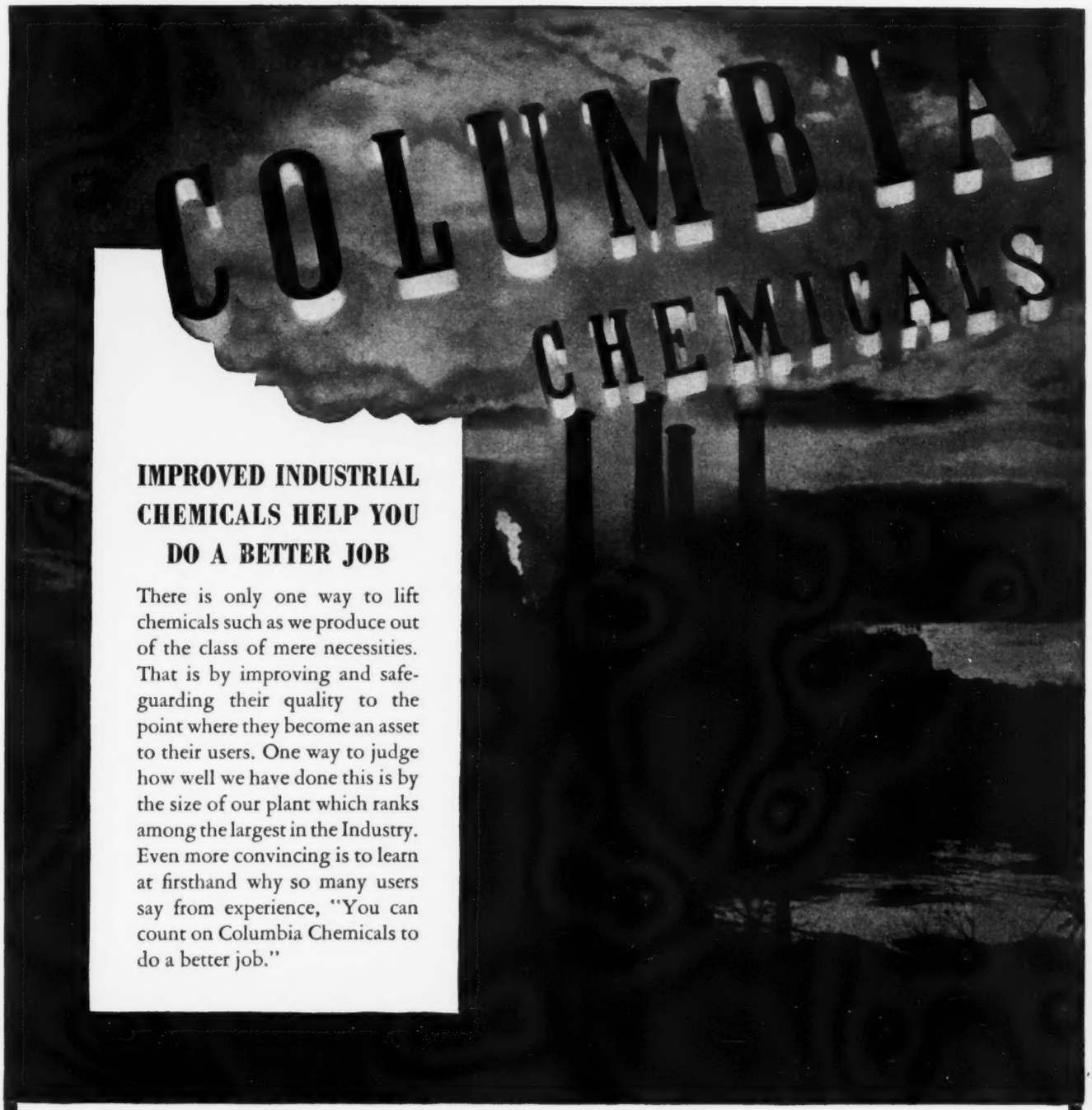
John V. Clement, agent for the last 11 years of Strong-Hemat & Co., North Adams, Mass., has resigned. It is said that no successor will be appointed.

Walter E. Hess is general manager of the Bradley Knitting Division of the George W. Borg Corp. which recently acquired the former Bradley Knitting Co., Delavan, Wis. **C. J. Jordan,** who had been with Bradley for some years, was appointed superintendent in charge of manufacturing at that plant.

Henry L. Fallon has been appointed representative of Joshua L. Baily & Co., New York, in Boston, having charge of the New England territory. He succeeds the late Ernest O. Nichols.

Thomas Cousins has been made general manager of Dwight Mfg. Co., Alexander City, Ala. He succeeds **Allen Little.**

Fred W. Steele, New Bedford, Mass., secretary of the New Bedford Cotton Manu-



IMPROVED INDUSTRIAL CHEMICALS HELP YOU DO A BETTER JOB

There is only one way to lift chemicals such as we produce out of the class of mere necessities. That is by improving and safeguarding their quality to the point where they become an asset to their users. One way to judge how well we have done this is by the size of our plant which ranks among the largest in the Industry. Even more convincing is to learn at firsthand why so many users say from experience, "You can count on Columbia Chemicals to do a better job."

ESSENTIAL INDUSTRIAL CHEMICALS

SODA ASH • CAUSTIC SODA • SODIUM BICARBONATE • LIQUID CHLORINE
SILENE • CALCIUM CHLORIDE • SODA BRIQUETTES • MODIFIED SODAS
CAUSTIC ASH • PHOSFLAKE • CALCENE • CALCIUM HYPOCHLORITE

COLUMBIA
COLUMBIA CHEMICALS

PITTSBURGH PLATE GLASS COMPANY
Columbia Chemical Division
30 ROCKEFELLER PLAZA
NEW YORK, N.Y.

Chicago • Boston • St. Louis • Pittsburgh • Cincinnati • Cleveland • Minneapolis • Philadelphia • Charlotte

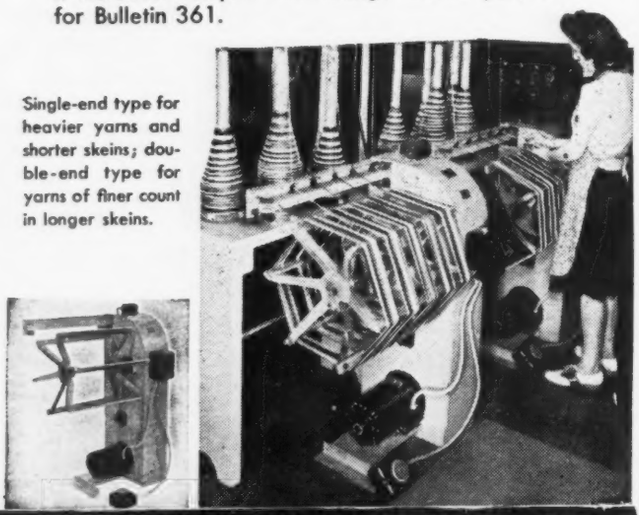
SKEIN REELING

with unique efficiency for ALL Kinds and Counts of Yarn

By this new twin-unit, single-operator method of skein reeling, FIDELITY machines quickly pay for themselves by savings that include time and floor space as well as cost. Result:—greater output per shift at a handsome saving—also less operator fatigue.

If increased output and savings interest you, send for Bulletin 361.

Single-end type for heavier yarns and shorter skeins; double-end type for yarns of finer count in longer skeins.



FIDELITY MACHINE CO.
3908-18 FRANKFORD AVE., PHILADELPHIA

DRUMMOND SOAP

RINSES **- - EASILY AND COMPLETELY**

Improves fulling and scouring.
Requires minimum of time and steam.
Produces finest hand.
Assures brightest colors.
Holds soap costs to a minimum.
Give DRUMMOND SOAP a trial.

OTHER HIGH GRADE "STANDARD" PRODUCTS
Stanso Palm Oil Curd Soap, Etc.

Standard Soap co. of camden

Charlotte, N. C. CATO M. LITTLETON 426 PARK TERRACE • 1918 SOUTH SIXTH ST. Camden, N. J. • Woonsocket, R. I. G. TANGUAY 281 HARRIS AVE.

NEWS ABOUT MEN

facturers' Association, has been appointed chairman of the United Service Organizations for the New Bedford district, and is planning a campaign to establish a local setup to raise New Bedford's quota.

Wilbur K. Rhoades, gray goods buyer for Pacific Mills, will make his headquarters at the New York office hereafter, instead of the company's Boston office. **Frederic A. Deering** will continue as Mr. Rhoades' assistant.

Joe F. Chalmers, general superintendent of Mathews mill, Greenwood, S. C., has been appointed general superintendent of Greenwood (S. C.) mills also. He began his mill career as a loom fixer at Greenwood mill in 1921, and with the exception of five years with the Springs Cotton Mills, has been with Greenwood plants since. He was made overseer of weaving in the Greenwood mill in 1930 and was promoted to superintendent in 1931. In 1940 he was transferred to Mathews mill and promoted to general superintendent of the plant late in that year.

J. J. Sims has been elected secretary of Glenwood Cotton Mills, Easley, S. C., succeeding **W. E. Mays.**

A. J. Mitchell, who has held the position of assistant treasurer of Shamrock Damask Mills, Landrum, S. C., has been elected secretary of the company also, succeeding **H. I. Hodges.**

J. O'H. Finlay has been elected secretary of American Finishing Co., Memphis, Tenn., succeeding **A. H. Pattin.**

Omer Bowrez observed the 50th anniversary of his association with William Skinner & Sons, Holyoke, Mass., on July 7. He is a loomfixer and has subscribed to TEXTILE WORLD since 1904.

Charles Thornhill, of Claremont, N. H., has been appointed overseer of dyeing at the Strong, Hewat & Co. mill, North Adams, Mass. He succeeds **James Young.**

Clinton Smullyan has established a sales office to represent Wolsey, Ltd., a British knit goods manufacturer, in New York.

Harold W. Whitcomb, formerly assistant production manager of the manufacturing division of Marshall Field & Co., Spray, N. C., has been appointed superintendent of retail manufacturing services.

W. A. Forsyth, head of W. A. Forsyth Silk Co., Philadelphia, has been elected commander of the Philadelphia Chapter of the Yankee Division (26th) Veterans Association.

Obituary

Gwynn T. Shepperd, president and treasurer of Shepperd Mills, Philadelphia, Pa., died June 20. He was the originator and secretary of the Jamestown, Va., Exposition in 1907. He has left the active management of the woolen mill which he founded in the hands of two of his sons and traveled extensively during the last 15 years, crossing the Atlantic some 70 times.

Capt. Charles S. Holden, 84, president of the Holden Knitting Co., from 1889 to 1919 president of the Aetna Hosiery Co., and for a time head of the Aetna Waste Co., of Worcester, Mass., died recently.

Arthur H. Carr, 62, founder and president of the Carr Mfg. Co., Bristol, R. I., makers of rubber thread, died at Fish Hawk Farm, his home here, May 27.

Joseph E. Carroll, 62, president of the J. E. Carroll Co., Lowell, Mass., textile machinery, died suddenly on June 11.

Lyman A. Cousens, 61, vice-president and director of Dana Warp Mills, Westbrook, Me., and a director of the Long, Liberty & Hanson Co., Portland, Me., died June 15.

Herbert Lyman, 77, president Whittenton Mfg. Co., Inc., Taunton, Mass., who had also been chairman of the board of the Merrimack Mfg. Co., Lowell, Mass., at one time treasurer of the Hadley Co.,

HERBERT LYMAN

THE ABC OF FULLING

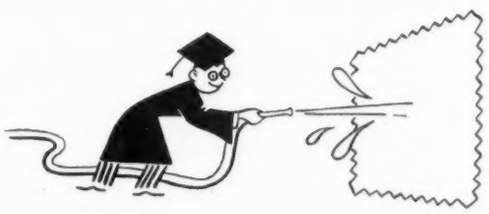
A *OPEN-MINDED ON THIS QUESTION OF FULLING EFFICIENCY?*

B *YES!*

C *THEN TEST OLATE!*

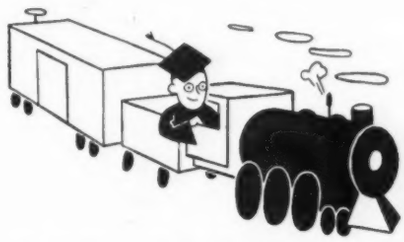
IF there's even a lingering doubt in your mind as to the efficiency of your present fulling agent, it will pay you to put Olate to the test.

It is our honest belief that no other fulling agent on the market can out perform Olate . . . that no other fulling agent can handle this important operation more efficiently, more uniformly, more economically.



Olate has the excellent lubricating properties you would expect of a high-grade, neutral, low titer soap made from carefully refined liquid oils. It has the detergent properties necessary for loosening the oils and dirt present in woolen fabrics. Perhaps most important of all, it has the emulsifying qualities so essential in maintaining these impurities in suspension or dispersion until they can be flushed thoroughly from the fibers.

Olate is a *safe* fulling agent. Olate's fluid solutions provide thorough, even penetration



of the cloth. Its excellent rinsing efficiency—the result of its extremely low titer—helps produce clean, sweet-smelling goods.

As a safeguard against bare spots, uneven shrinkage, non-uniform fulling, and poor felting, Olate is second to none. It will help you turn out woolens and worsteds you'll be proud to ship from your plant. But why not check these Olate advantages yourself? There's a mighty good chance that Olate will give you some new ideas as to how a fulling agent *should* perform.

PROCTER & GAMBLE • CINCINNATI, OHIO

Olate *for top-notch wet finishing*

ANNOUNCEMENT

The Manufacturers of

LEYLAND MYCOCK EXPANDERS

now offer

$5.00

ALLOWANCE

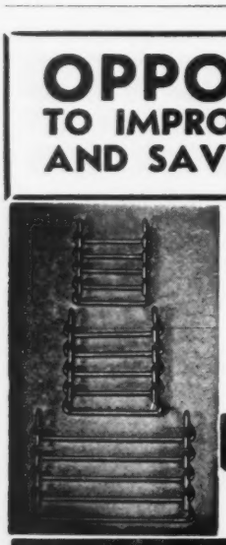
on all old Expander Bars against the purchase of new Bars.

•

Thomas Leyland Machinery Co., Inc.

Readville, Mass.

OPPORTUNITIES
TO IMPROVE YOUR PRODUCT AND SAVE YOUR MONEY . . .



NARROWING CHAIN

Accurately made from high grade material—built to last and to hold its shape.

SINKER HEAD SLOT CUTTERS

The ideal tool for cleaning out slots in sinker and divider heads. Made in all gauges. Each one comes in a leather carrying case.

Send for bulletin giving full details on these and other products.

THE SINKER WITH THE **HARDENED THROAT** (PATENTED) AND THE **HARD BUTT**

GIVES YOU..

ESS BREAKAGE
ONGER SERVICE
OWER OPERATING COST
ONGER UNIFORMITY OF PRODUCT

THOMAS & SKINNER
STEEL PRODUCTS COMPANY

1119 East 23rd Street — Indianapolis, Indiana

NEWS ABOUT MEN

Holyoke, Mass. and in charge of the Boston business of the American Thread Co., Holyoke, Mass., died suddenly at Boston on June 15. He was a son of the late Arthur T. Lyman, New England textile leader, and was born in Boston, being graduated from Harvard College in 1886.

George McNeir, 81, chairman of the board of Mohawk Carpet Mills, Amsterdam, N. Y., died in Amsterdam June 15. After practicing law for 15 years, he became credit manager of W. & J. Sloane, New York, in 1894, and soon thereafter was made vice-president and general manager. In 1920 he formed the Mohawk Carpet Mills by a merger of Shuttleworth Bros. Co. and McCleary, Wallin & Crouse. In 1922 he retired from W. & J. Sloane to become chairman of the board of the new company.

Roy L. Jones, director of the sales order department of the Calco Chemical Division, American Cyanamid Co., Bound Brook, N. J., died June 12.

Abraham Spandau, 54, for the last 30 years in the wool goods business in New York, and recently selling agent for Yankee Worsted Mills, died recently.

Helen M. Mullin, 51, treasurer of Neponset Woolen Mills, Canton, Mass., died on June 7 at her home in that place.

Edward J. Smail, Jr., 52, general sales manager of the Rubber Service Department of Monsanto Chemical Co. died June 8 in Akron, Ohio.

Stanley Warzala, supervisor of safety at the Calco Chemical Division of American Cyanamid Co., Bound Brook, N. J., died after a short illness, June 9.

Jonah P. Curlee, 65, retired superintendent of Kesler Cotton Mills, now known as Cannon Mill No. 7, Salisbury, N. C., died recently.

Charles Legon Crenshaw, 53, master mechanic at Dunean Mills, Greenville, S. C., died June 9.

Albert Lehmann, Jr., 55, superintendent of Dixie Cotton Mill, LaGrange, Ga., a unit of the West Point Mfg. Co., died May 20. He had been connected with the West Point organization for the last 33 years and had been superintendent of the LaGrange unit since 1924.

J. Louis Dudley, 53, superintendent of spinning department of W. A. Handley Mfg. Co., Roanoke, Ala., died June 13.

GEORGE McNEIR

Alfred E. Learoyd, 84, one of the last of the pioneers of the Huddersfield England, fine worsted trade, died in England recently.

Fritz Quittner, 57, vice-president and general manager of the Merion Worsted Mills, West Conshohocken, Pa., died last month. He had been in the worsted business most of his life and for many years with the old firm of S. B. & B. W. Fleischer, Inc.

Joseph H. Cull, 52, president and treasurer of the Cull Silk Mills, Pawtucket, R. I., died June 22.

Walter L. Coursen, former president of Tubize-Chatillon Corp., New York, from 1922 to 1929 died at New Rochelle, N. Y., June 25.

Rolland R. D. Rice, 62, for 20 years of the firm of Myrick & Rice, New York, and for the last 10 years in business on his own account, died July 1.

Clinton C. Brown, 53, president and treasurer of the Boston wool and mohair firm bearing his name, died on June 26 at his home in Newton, Mass.

Paul White Douglass, 53, a sheet and pillow case specialist, who, after some years with Cannon Mills and Pepperell Mfg. Co., had recently joined Riverside & Dan River Cotton Mills, died early last month.

Pierce Rehrig, owner of the Lehighton (Pa.) Knitting Mills, died at Leighton last month.

Ronald J. McNamee, 39, manager of the Ballston Spa (N. Y.) Woolen Mills, died June 17.

R. Henry Grier, 78, associated for 35 years with Joseph Bancroft & Sons Co., Wilmington, Del., until his retirement in 1919, died last month.

James Stewart Gibson, 74, who retired in 1937 as administrative principal of the Textile High School, New York, died at his home in Montclair, N. J. June 20.

Add SALES APPEAL with beautiful seams

MADE ON THE SINGER 242 HOSIERY SEAMER

All women want lovely sheer stockings with fine, straight pencil-line seams that are fashion-smart, yet have adequate elasticity and durability. The new high speed Singer 242 was especially designed to produce seams of this kind.

The Singer 242 operates with equal efficiency on the most delicate Nylon and silk hosiery as well as on wool, cotton and lisle. It not only produces better seams, which are stitched straight—but is the fastest hosiery seamer on the market today—simple to operate at speeds limited only by the operator's ability to guide the work.

Let us prove the superiority of the Singer 242 by testing it in your own plant on your own work. There is no cost or obligation. Contact the nearest Singer Shop for the Manufacturing Trade today, and arrange for your test.

SINGER

SEWING MACHINE COMPANY

MANUFACTURING TRADE DEPARTMENT

149 BROADWAY, NEW YORK, N. Y.

SINGER SEWING MACHINE CO.
149 Broadway, New York, N. Y.

Please send complete information about the Singer 242 to

Name_____

Street_____

City_____

State_____

Copyright U.S.A. 1941 by The Singer Manufacturing Co.
All rights reserved for all countries.

RYERSON CERTIFIED STEELS

Large Stocks... Uniform High Quality... Immediate Shipment... Principal products include—Alloy Steels, Tool Steels, Stainless Steel, Hot Rolled Bars, Hoops and Bands, Beams and Heavy Structurals, Channels, Angles, Tees and Zees, Plates, Sheets, Cold Finished Shafting and Screw Stock, Strip Steel, Flat Wire, Boiler Tubes and Fittings, Mechanical Tubing, Rivets, Bolts, Nuts, Washers, etc. Write for Stock List. Joseph T. Ryerson & Son, Inc. Plants at: Chicago, Milwaukee, St. Louis, Cincinnati, Detroit, Cleveland, Buffalo, Boston, Philadelphia, Jersey City.

for Results

USE

Mc GRAW-HILL

DIRECT MAIL LIST SERVICE

TEXTILE MILL NEWS

Cotton Mills News

Alice Mill of U. S. Rubber Co., Woonsocket, R. I., idle for 10 years will be reopened in a few weeks to produce barrage balloons for the Army. About 200 will be employed.

American Thread Co., Georgia, Dalton, Ga., has completed a two-story addition.

Atmore, Ala.—A plant for treating an experimental planting of ramie will be built at Atmore.

Buffalo Mill, Shelby, N. C., has completed installation of a 225-hp. engine, which replaces one destroyed by fire several weeks ago.

Central (S. C.) **Mills** have installed 15 new Saco-Lowell cards and eight long-draft Saco-Lowell spinning frames.

Chadwick-Hoskins Co., Charlotte, N. C., has constructed a new waste house at No. 4 unit.

Corsicana (Tex.) **Cotton Mills** have installed one Hermas shearing machine and 12 new long-draft roving frames.

V. Dionne & Fils, St. Georges de Beauce, Que., will be known as Dionne Spinning Mills Co. The firm will have a plant with 7,500 cotton spinning spindles and 2,000 twisting spindles for ply yarns. Spun rayon and cotton yarns will be produced. Arsene Dionne is president and Ludger Dionne vice-president and general manager.

Dominion Textile Co., Ltd., Montreal, Que., has just purchased 203 Model X2 Draper Looms, 44 in. wide, for installation in the Cotton Division of the Sherbrooke Branch, to replace some of the old looms. The company also plans to modernize its opening and picking machinery.

Erwin Cotton Mills, Durham, N. C., are constructing an addition to the bleachery, to increase production by 20%. The mills will install two additional washing machines.

Fort Valley (Ga.) **Cotton Mills** have been purchased by C. L. Upchurch & Son, Inc., and will be operated as the Winton Mills No. 2, under the direct supervision of J. C. Upchurch.

Georgia-Kincaid Mills, Griffin, Ga., was damaged about $15,000 by a small tornado on June 14.

Glendale Spinning Mills, Ltd., Hamilton, Ont., are installing additional cotton spinning equipment. Plans are being made for the erection of a mill addition.

Gossett Mills interests, operating mills in Anderson, S. C., Calhoun Falls, S. C., Charlotte, N. C., and Martinsville, Va., have moved the general offices from Charlotte to Anderson, and S. Frank Jones, purchasing agent for this chain of mills, in the future will make his home in Anderson.

Grantville (Ga.) **Mills** have asked bids on general contract for one-story addition for warehouse, to cost close to $30,000. Contract will be awarded soon. Robert & Co., Atlanta, Ga., are architects and engineers.

Groves Thread Co., Gastonia, N. C., is constructing an addition 40 x 12 ft., to the picker room of unit No. 2. The company is also adding space to the picker room of the No. 1 unit. An addition is also being constructed to the machine shop, which will greatly enlarge this department.

Hannah Pickett Mills, Inc., Rockingham, N. C., is modernizing its No. 1 and No. 2 units. The company is installing new drawing, slubbers, intermediates, fine roving frames, spinning, spooling and warping equipment. The machinery which is being removed to make room for the new machinery will not be discarded since it is in good condition, but will be sold.

Hawkinsville (Ga.) **Cotton Mills** recently changed its name to Superba Cotton Mills. Fred R. Thomas is manager under the new ownership.

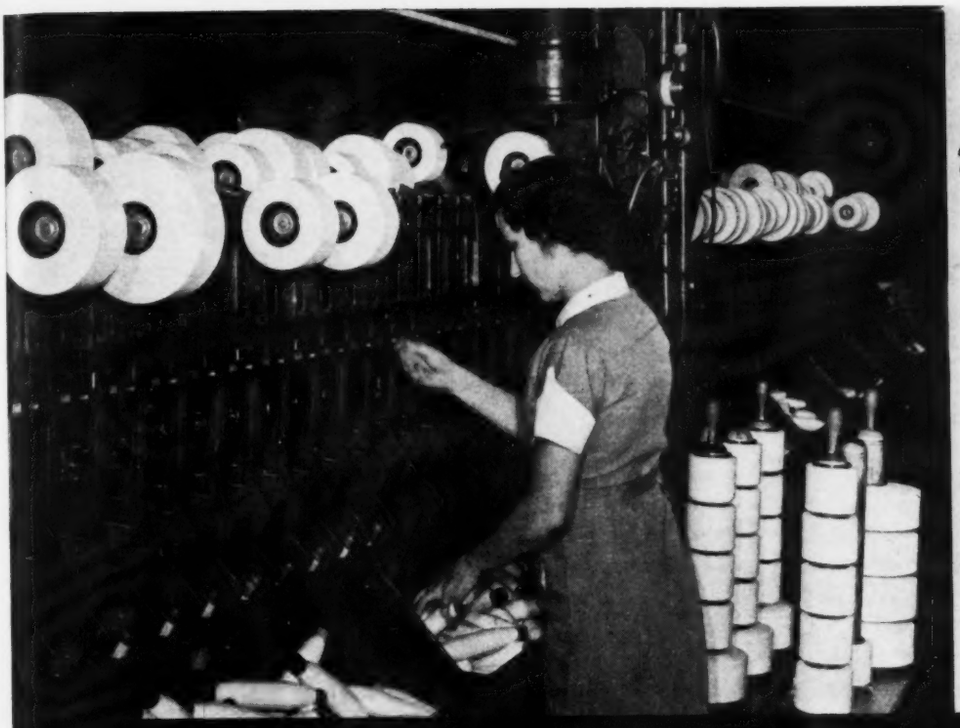
International Braid Co., Providence, R. I., has had plans prepared by Eugene Whipple, Providence, for a 1-story, 22x80 ft., brick mill addition to the cord department. O. D. Purington Co., Inc., Providence, has been awarded the contract.

L. B. Jackson Co., Asheville, N. C., will soon complete a modern $60,000 mill building in which the company will open a new linen plant at Charleston, S. C.

Monroe (Ga.) **Cotton Mills** have awarded contract to Henry B. McKoy Co., Greenville, S. C., for addition to plant. J. E. Sirrine & Co., Greenville, prepared the plans.

New Bedford (Mass.) **Goodyear** plant, closed two years ago, has been reopened for production of barrage balloons and similar products for the Government; 600 workers.

Pacific Mills, Lyman, S. C., unit, are installing new spin-



BARBER-COLMAN SYSTEM OF SPOOLING AND WARPING

Operation of Barber-Colman Automatic Spoolers Requires a

MINIMUM of EFFORT

Convenience to the operator is of great importance when it comes to achieving and maintaining efficient production. "Efficiency" means greatest results with the least effort. The design of Barber-Colman Automatic Spoolers is such that only the simplest and easiest motions are required, resulting in a maximum of production with a minimum of fatigue.

BARBER-COLMAN COMPANY

ROCKFORD, ILLINOIS, U. S. A.

FRAMINGHAM, MASS., U. S. A. • GREENVILLE, S. C., U. S. A. • MANCHESTER, ENGLAND • MUNICH, GERMANY

FREE WATCH CHARM.
Jenkins Bros., New York, N. Y. Handsome miniature valve suitable for use as charm on watch chain. Sent without cost or obligation in response to penny postcard request addressed to Dept. UJ, 80 White Street, New York, N. Y.

JENKINS BROS. New York, N. Y. Air Compressor Check Valve. Folder 191 describes and illustrates Air Compressor Check Valve Figure 56, employing an entirely new seating principle. Folder gives facts about perhaps the most severe test ever given any valve, covering seven months of grueling service; yet Figure 56 remained bubble-tight after more than 40,000,000 pulsations. Conically shaped, light weight, stainless steel disc cleans itself on every lift-and-reseating operation; spring-loaded to cushion upstroke and accelerate downstroke for immediate closure. Large-sized cutaway view in Folder 191 permits detailed examination of new seating principle and construction.
(advertisement)

MOUNT HOPE SWING GUIDER
THE PRINCIPLE
A. NIP ROLLS
B. PIVOT
C. LEFT HAND SELVAGE
1. Swing of rolls in this direction releases selvage toward position 2.
3. Swing of rolls in this direction pulls selvage toward position 4.
The position of the selvage determines the swing of the rolls.

LOW MAINTENANCE Waterproof, rustproof, purely mechanical. No electric switches or coils to burn out or short circuit. No air valves to clog. Only 2 moving parts. Reversible rubber roll.

MAXIMUM SPEED. GENTLE, POSITIVE, DEPENDABLE ACTION.

Write for descriptive circular

MOUNT HOPE MACHINERY COMPANY NORTH DIGHTON, MASS.

Scott is STANDARD

It is customary, in technical articles or talks, to find physical testing results expressed in terms of *Scott Testers. Our 57 models include machines expressly designed for the various types of tests on textiles, rubber, wire, paper, leather, etc.

SCOTT TESTERS

* *Registered Trademark*

HENRY L. SCOTT CO. Providence, R. I.

HEDDLE FRAMES
•
HEDDLES
•
SHUTTLES
•
HAND CARDS • STRIPPER CARDS

THE SHUTTLE PEOPLE

WATSON-WILLIAMS
MANUFACTURING CO.
MILLBURY, MASSACHUSETTS
SOUTHERN OFFICE: E. V. Wilson, 810 Woodside Bldg., Greenville, S. C.
NORTHERN REPRESENTATIVES: G. C. Burbank, 3 Beaconsfield Rd., Worcester, Mass., W. F. Daboll, 22 Barnes St., Providence, R. I.

ning machinery, some of which has been put into operations. It is all of the Whitin long-draft type.

Palmetto (Ga.) **Cotton Mills, Inc.,** have begun one-story addition, for office and other operating service. Cost estimated about $24,000.

Parkhill Bedding, Ltd., Winnipeg, Manitoba, will soon erect three-story and basement addition, about 60 x 100 ft., estimated to cost over $85,000, with equipment. G. G. Teetor, Winnipeg, is architect.

Patterson Textile Mill, Lenoir, N. C., has been sold to H. S. McIntyre of Charlotte, N. C., who will manage the plant. This mill, built just after the Civil War by the Gwyn Harper Mfg. Co., has been in operation ever since.

Perfection Mills, Weldon, N. C., idle for some time, has been purchased by Fletcher H. Gregory of Halifax, N. C., and several Weldon citizens, and has just been put back into operations.

Robinson Yarn Mills, Dallas, N. C., have begun construction of a storage building, to adjoin the opening department.

Royal Mfg. Co., Rahway, N. J., has arranged for lease of factory of American-Marietta Paint Co., Railroad Ave., Lincoln, N. J., comprising a main building and auxiliary adjoining structures, totaling about 45,000 sq. ft. in all, and will move its plant thither.

Riverside offices of Riverside & Dan River Cotton Mills, Inc., Danville, Va., will be consolidated with the Dan River division offices and moved to Schoolfield.

Springs Cotton Mills, Fort Mill, S. C., have installed a conveyor system in the No. 1 unit.

Sherman (Tex.) **Mfg. Co.** has completed installation of two new Abbott winders, and has replaced 44 old looms with new Model X looms.

Superior Yarn Mills, Statesville, N. C., and Tuckaseege, N. C., have moved the offices from Statesville to a new building at Tuckaseege. The change was made July 1. J. C. Johnson, of Statesville, will have charge of the offices.

Texas Textile Mills, Waco, Tex., unit, have installed one Morrison Sanforizer and one Hermas shearing machine and brusher.

West Point Mfg. Co., Shawmut, Ala., unit, has begun enlarging and remodeling the office building at a cost of $10,000.

Wool Mill News

American Felt Co., Glenville, Conn., has let general contract to Mertz Co., Port Chester, N. Y., for one-story addition and improvements to present building. Cost estimated close to $50,000 with equipment.

Bell Co., Worcester, Mass., recently completed an 80x200 ft. wool warehouse to hold 5,000,000 lb. of grease wool.

Bigelow-Sanford Carpet Co., Inc., Thompsonville, Conn., has approved plans for one-story addition, about 80x80 ft., for office and general service.

Excelsior Mills, Union, S. C., is being converted for woolen goods manufacture by Deering Milliken & Co.; 60 C&K looms will be installed.

Hillside Hand Weavers, Inc., Stafford, Conn., has been organized with capital of $10,000, to operate a local woolen mill. New company is headed by Herbert A. West, Sr. and Jr., both of Staffordville, Conn.

Hudson (Mass.) **Worsted Co.,** is building a cooling tower 17x35 ft. and a pump house 12x17 ft. Earl V. Aldrich, Hudson, drew the plans.

Interstate Weaving Co., Inc., Holyoke, Mass., recently organized with capital of 300 shares of stock, plans early operation of a local woolen mill. William T. Rosengarten is president, and Samuel S. Fish, treasurer.

Joliette Spinning Mills Ltd., Joliette, Que., have placed in operation the new woolen weaving plant, consisting of 24 Crompton & Knowles looms. M. Roger de Fougerolles is in charge of the two plants in Joliette.

Arnold Laxson Co., owners of Lowe Mills property at Huntsville, Ala., is negotiating with representative of an eastern woolen mill for sale of property to establish a woolen mill. The Lowe Mills, as a cotton cloth plant, has been closed about eight years.

Maanexit Spinning Co., Webster, Mass., has awarded contract to Emil Dupont for construction of a 1-story brick addition, 34x50 ft. Dwight Seabury Co., Pawtucket, R. I., are engineers for the project.

Peerless Woolen Mill, Rossville, Ga., has constructed an addition to the dye house.

Piscataquis Woolen Mill, Guilford, Me., closed since March, 1938, will soon be reopened and operated on a full-time schedule by the Guilford Textile Corp., with Karl Lederer as president.

ARE WE GOING TO NEED A LARGER PLANT?

NO, WE CAN HANDLE THE ADDITIONAL WORK WITH NEW UNION SPECIALS!

(Below) The Union Special "LOCKSTITCH"

Balanced A UNION SPECIAL MACHINE Production

HERE'S food for thought! Far-sighted production executives are pointing out that current increased production demands can mean much more for clothing manufacturers than just a job of building more and larger plants. Instead, they see an extraordinary opportunity for individual plants to get rid of older, slower machines and to replace them with latest, high speed units at a time when new equipment can pay for itself in a hurry. This is good protection against the future because the plant with the most efficient equipment is always in an advantageous position regardless of production levels.

Union Special can help you get this kind of protection. We will be glad to send you information about latest Union Special machines.

UNION SPECIAL MACHINE CO.

432 North Franklin Street, Chicago, Illinois

"World's Largest Exclusive Manufacturer of Industrial Sewing Machines."

CROSS FLATLOCK YARN

CROSS COTTON MILLS CO.
MARION, N. C.

You can hold your carding
troubles in the palm of your hand
When you use
Booth Quality
Card Clothing
Benjamin Booth Co.
Allegheny Ave. & Janney St., Phila.

Heads set flush with machine surfaces. No sharp edges or slots to burr and pull threads; screws are chamfered at the point, outside edge of head and top edge of socket. The internally operated hex key sets the screw quickly and *tightly* without slippage. Samples supplied to your specifications.

THE ALLEN MANUFACTURING COMPANY
Hartford, Connecticut, U. S. A.

Royal Spinning Mills, Lowell, Mass., has been organized by members of the Stursberg family, who own and operate the Livingston Worsted Mills in Holyoke, Mass., to buy the Royal Worsted Co., Lowell. Lowell plant has 4,800 spindles.

St. Jean Combing & Spinning Co., Putnam, Conn., has begun operations in local leased building for carding and combing of wool tops, etc., replacing mill at Bristol, R. I., destroyed by fire March 23. Building was formerly Putnam Spinning Co.

St. Marys (Ohio) **Woolen Mfg. Co.** plans one-story addition, 30x76 ft. Cost estimated close to $25,000, with equipment. E. E. Freytag, Sidney, Ohio, is architect.

Stillwater Worsted Mills, Greenville, R. I., is building a 1-story brick addition. A. F. Smiley Construction Co., Pawtucket, has the general contract.

Yorkshire Worsted Mills, Woonsocket, R. I., are being liquidated by W. B. Dunn, Providence.

Rayon & Silk Mill News

Ann Mfg. Co., Granite Quarry, N. C., recently organized with capital of $10,000, plans operation of local mill for production of rayon fabrics. Incorporators include J. H. Lyerly and Charles McCanless, Granite Quarry.

British - American Silk Mills Ltd., at Granby, Que., is modernizing its plant with installation of 24 Crompton & Knowles box looms to replace obsolete machinery.

Dominion Textile Co. Ltd., Montmorency Falls, Quebec, is preparing its plant for production of powder bag fabrics from silk waste.

Harvard Plush Co., Inc., Fall River, Mass., recently organized with capital of 1000 shares of stock, no par value, will operate a mill on Pleasant St., secured under lease. Almanzar Heroux is president, and Herve Heroux, treasurer.

Hampton Co., Easthampton, Mass., has sold the entire machinery and equipment of its viscose rayon department, closed two years ago, to a newly-organized Mexican firm, Productora de Artisela of San Angel, Mex. The machinery will provide Mexico with its first viscose rayon producing plant, which will begin operation next year. The deal will not affect other departments of the Hampton Co., Ernest Mensel, an executive, said.

Marietta (Pa.) **Silk Co.** is resuming operations at its branch mill in Waverly, N. Y., after a shutdown of four years, and will give employment to about 40 persons.

Stanley (N. C.) **Mills, Inc.,** recently organized by O. Max Gardner, former Governor of State, and W. J. Carter, head of Carter Fabrics Corp., Greensboro, N. C., to take over former local mill of Katterman & Mitchell Co., (previously reported) have asked bids on contract for alterations and improvements in buildings, to be operated for carding and spinning of acetate fiber. A large addition will be erected, for which plans are being completed. Entire project is reported to cost close to $1,000,000, including machinery, for which orders are being placed. J. E. Sirrine & Co., Greenville, S. C., are architects and engineers. Initial equipment of 15,000 spindles may later be expanded to 50,000.

Staunton Textile Corp., Staunton, Va., has been organized under Delaware laws as a subsidiary of Celanese Corp., New York, N. Y., with nominal capital of $25,000, to construct and operate the branch mill for parent company at Verona (Augusta County), Va., where tract of about 150 acres of land has been acquired, as previously noted in these columns. New mill will be used for weaving, and is estimated to cost about $500,000, with equipment. Erection will begin at once.

Syntex Fabrics, Inc., plans construction of another addition to its plant at 600-619 Railroad St., Williamsport, Pa., to comprise 10,000 sq. ft. of floor space, providing space for 100 additional looms.

Tubize Chatillon Corp., Rome, Ga., unit, is installing a chemical recovery plant.

Knitting Mill News

B. & G. Hosiery Mills, Dunn, N. C., formerly Harnett County Hosiery Mills, Inc., have been put into operation, after being purchased at auction by George L. Cannady.

Bradley Knitting Co., Milwaukee, purchased by George W. Borg Corp. at recently bankruptcy sale, is now under managership of Walter E. Hess. C. C. Jordan has been named superintendent in charge of manufacturing at the Delavan, Wis., plant, which is running on men's and boys' sweaters.

Bristol Knitting Mills, Inc., Fall River, Mass., recently chartered with capital of 1000 shares of stock, plans operation of a local mill. Samuel and

"WELL, I'LL DO MY BEST...."

But it takes more than a will to please to produce top-quality replacements in knitting machine parts.

This gentleman is on a "spot." As your local machinist he quite naturally wants to do the job for you . . . do it right, too . . . but the fact remains that he is neither skilled nor equipped to make the duplicate of any Scott & Williams knitting machine part. Which puts you, Mr. Mill Operator, likewise on a "spot" when operating efficiency snags and cost schedules fall down due to the inadequacies of these "substitute" parts.

It is too much to expect any local machinist to know and be able to take into consideration all the factors that have gone into the making of each and every part of a Scott & Williams knitting machine . . . all the design, engineering, metallurgical, tooling and other processes so important to the efficiency of knitting machine operation. And, when 55,400 different S & W standard part replacements are no further away than a telephone call, a telegraphed or teletyped order, you can readily see that there is no expediency to be served by turning to "local talent" for the replacement of *any* S & W part.

Your orders will receive prompt, right-of-way attention by our staff . . . an important thing to remember in busy times like these. Teletype service is FREE from our High Point or New York offices.

It takes S & W parts . . for S & W machines . . for S & W production efficiency . . . at all times!

ESTABLISHED 1865 **SCOTT & WILLIAMS** INCORPORATED

"THIS IS THE SCOTT & WILLIAMS MACHINE AGE"

40 WORTH STREET, NEW YORK, N. Y.

WHITMAN
Yarns

ARLINGTON MILLS
LAWRENCE, MASS.

CRAMERTON MILLS
CRAMERTON, N. C.

MONOMAC SPINNING CO.
LAWRENCE, MASS.

NONQUITT MILLS
NEW BEDFORD, MASS.

WILLIAM WHITMAN COMPANY, Inc.
NEW YORK BOSTON PHILADELPHIA CHARLOTTE

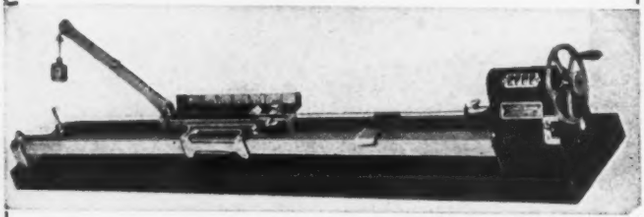
AIR CONDITIONING ENGINEERS
to the
TEXTILE INDUSTRY
for 25 Years

HUMIDIFYERS
ATOMIZERS
UNIT SYSTEM
AIR FILTERS

Hundreds of installations in all types of textile mills in the U. S. and many foreign countries

Bahnson System
AIR CONDITIONING ENGINEERS
THE BAHNSON CO.
Winston-Salem, N.C.

ALFRED SUTER 200 5th Ave. NEW YORK
APPROVED TESTING INSTRUMENTS
Send for our bulletins



Twist Tester with re-set counter, tension control and take-up registering device.
MADE FOR HAND OR MOTOR DRIVE
We also have a 10" single Twist Testing attachment for either.

Irving Greenberg are president and treasurer, respectively.

C. & M. Hosiery Mills, Inc., Baltimore, Md., plans improvements and alterations at its mills.

Caswell Knitting Mills, Yanceyville, N. C., are installing additional full-fashioned knitting machinery and auxiliary equipment.

Chapin Hosiery Co. has been formed to take control of the Longmeadow Mills hosiery plant in Springfield, Mass., to direct plans for the resumption of operations. The property was foreclosed recently by John J. Lester, on behalf of the surviving trustees of the Linden Associates, who hold a $14,000 mortgage. The Chapin Hosiery Co., controlled by the Chester (Ill.) Pure Silk Hosiery Co., former operators of the mill, will buy back the property and manufacture Nylon hosiery.

Clarke Mills, Jackson, Ala., a unit of Vanity Fair Silk Corp., are installing 20 new machines for knitting rayon and silk fabric, for manufacture of women's underwear.

Co-Ed Knitting Mills, Philadelphia, were liquidated by auction sale on June 18. There were 28 42-gage full-fashioned machines.

Contrico, Inc., Los Angeles, Calif., is the first rayon jersey knitting mill west of the Alleghenys. It has begun operation at 625 South San Pedro street, with an initial investment of $100,000. The plant is designing and producing knitted wear from yarn to finished garment. Jac Van Der Velde is president and Maurice Dreese, vice-president. Both manufactured textiles in Holland before German invasion.

Ellis Hosiery Mills, Hickory, N. C., have installed two more Zephyr extractors, sold through Morris Speizman, Charlotte, N. C.

Goldston (N. C.) **Hosiery Co.** has completed installation of machinery for the manufacture of rayon and cotton half hose. Company is managed by C. C. Clontz, formerly of Hickory, N. C.

Grover Knitting Mills, Montreal, Canada, has started a five-story addition to be completed in September.

Hildebran (N. C.) **Hosiery Mills** have installed Zephyr extractors, purchased through Morris Speizman, Charlotte, N. C.

Marlyn Mills, Inc., a New York concern, will take over and operate the former plant of Lengel-Fencil Hosiery Co., Anniston, Ala., which has been closed since 1933.

Miss Lois McAffee and **Miss Mamie McAffee,** Granite Falls, N. C., have awarded contract to the H. C. Cline Construction Co., Hickory, N. C., for a hosiery mill building in Granite Falls.

E. Richard Meinig Co., Reading, Pa., is constructing a steam powerhouse, reported to cost $50,000, including boiler units and auxiliary equipment.

Pacolet Knitting Co., Lynn, N. C., has discontinued business and the company's 210 circular knitting machines and auxiliary equipment have been sold.

S. & F. Hosiery Mill, Inc., Dayton, Tenn., is installing seven new full-fashioned hosiery machines.

Unique Knitting Co., Acworth, Ga., has installed a number of new Komet machines, giving a total of 72 of this type machine.

Whisnant Hosiery Mills have installed an additional 48-in. Zephyr extractor, purchased through Morris Speizman, Charlotte, N. C.

Winner Hosiery Mills, Boiling Springs, N. C., was sold at public sale for $3,250 to C. J. Hamrick & Sons.

Processing Plant News

Columbus (Ohio) **Coated Fabrics Corp.** has taken out a permit for three new one-story additions to mill, for which general contract was let to Lee Ruisinger, Columbus. Cost estimated close to $65,000, with equipment.

Liondale Bleach Dye Print Works, Rockaway, N. J., has been sold and may be reopened.

Pond Lily Co., New Haven, Conn., has let general contract to United Building Co., West Haven, Conn., for one-story addition, 100x150 ft. Cost estimated over $85,000, with equipment. Leo F. Caproni, New Haven, is architect and engineer.

Ponoco Dye Works, Inc., Oxford, N. J., recently chartered with capital of 500 shares of stock, has leased a local building and will soon begin operation of a dyeing and finishing mill, specializing in plain goods of all kinds.

Velveray Corp. of America, Inc., Fall River, Mass., and Clifton, N. J., has been organized to take over and consolidate a group of four textile processing and printing mills, including Velveray Corp., and Velvart Corp., both Fall River; and Kromite Corp., and Hamilton Print Works, both of Clifton. All plants will be continued in operation.